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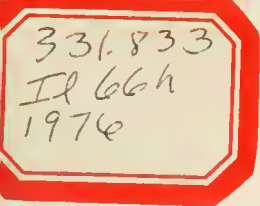
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HOUSING NEEDS ANALYSIS HANDBOOK FOR ILLINOIS

Revised June, 1976



Housing Research and Development
University of Illinois, Urbana, Illinois

HOUSING NEEDS ANALYSIS HANDBOOK FOR ILLINOIS

Revised June, 1976

HOUSING RESEARCH & DEVELOPMENT
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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INTRODUCTION Background of the Handbook

This handbook is designed to help local officials, especially at the county level, assess and monitor housing needs. Housing needs are generally defined as shortages and inadequacies in the local housing stock resulting in excessive housing costs, crowding, and occupancy of substandard units.

The handbook is based on the findings from a study carried out by the Housing Research and Development Program, University of Illinois at Urbana-Champaign, for the Department of Local Government Affairs (DLGA) of the State of Illinois during 1974-76. The primary goal of the first phase of the study (1974-75) was to determine whether or not a system for monitoring housing needs on a yearly basis could be derived using existing data at the county level. The housing needs analysis had to be appropriate for meeting federal standards such as the Housing Assistance Plan (HAP) requirements under the Housing and Community Development Act and the Housing Element requirements of Section 701, as well as a wide variety of purely local housing plans and needs assessments.

After analysis of several census data bases and field work in six Illinois counties specially selected to represent the great diversity of all Illinois counties, in terms of their economic and demographic characteristics, including population size, it was determined that high quality, consistent housing needs analyses could be made for all counties in the State. While efforts were made to develop as simple a method as possible requiring minimal use of computers, the analyses were found to require access to data resources beyond the scope of most county and regional planning agencies. Therefore, the program has been designed in such a way that a central source can provide computer summaries of the needed data, and a methodology by which to analyze and update them is provided in the handbook. Thus, local analysts can collect data readily available in their respective counties and utilize the computer-provided data to carry out the actual assessment of local housing conditions.

The detailed findings of the previous year's research are published in three documents: Monitoring Housing Needs in Illinois: An Ongoing Housing Market Analysis Model, Assessing Housing Needs in Illinois: Six Prototypical Test Counties, and Modeling Housing Needs: An Annotated Bibliography.¹

This handbook is one step in the effort to put these findings into operation. Other steps currently being completed include research on a municipal level housing needs model and research with respect to the development of a state housing data bank designed to disseminate data to local governments and to collect locally produced data in order to monitor statewide housing trends. The data bank will be housed either at the Department of Local Government Affairs in Springfield, or the Housing Research and Development Program in Urbana, Illinois.

The handbook presents different levels of analytic complexity in order to fit the several types of county housing and economic patterns and the varying extent of local analysis required. At the same time, to meet the objective of monitoring housing trends statewide, the handbook retains a uniform methodology and

¹These documents are available from the Housing Research and Development Program, University of Illinois, 1204 West Nevada Street, Urbana, Illinois 61801 (phone 217-333-7330) at the price of \$7.00, \$4.00, and \$3.00, respectively.

comparability of data sources. Because of its extensive resources and DLGA's role in aiding local governments, the State is best suited to coordinate the assembly of relevant housing data collected by its offices and federal agencies and to sponsor the creation of computer summaries and crosstabulations which will preserve uniformity among studies. Once provided with these baseline data and the housing needs methodology, local staff can complete the analysis and utilize that information to meet specific local needs. Their findings can also be sent back to the State data bank so that statewide housing trends can be estimated.

While this handbook places its primary emphasis on identifying housing needs, the end result of carrying out the analysis described here is really a total picture of the local housing market. It will enable planning agencies to identify trends and gaps in the housing market for higher-income households as well as low-income needs. Thus, the analysis should be useful in working with private developers and financial institutions and in making zoning and other planning decisions.

The handbook does not assume an extensive knowledge of the types of housing needs measures, data sources, and analytic variables used in housing market studies. Still, field tests of the handbook have shown that a general knowledge of the local housing market, while not necessary to complete the tables, is extremely helpful in interpreting the tables, choosing between alternative methodologies, and setting housing needs priorities based on the findings. Definitions of the measures, data sources, and variables discussed in the handbook are provided in the glossary included at the end. Readers interested in further definitions of these housing needs measures and variables and a discussion of the reasons underlying their choice relative to alternative measures as well as their application in the six test sites are referred to the three previously mentioned documents (p. vii). The overall background of housing market analysis also is reviewed in these earlier reports.

The main body of the handbook is divided into three chapters. Chapter I presents a more detailed outline of the handbook and describes how to use it. Chapter II describes how to use four different census data bases for deriving housing needs at varying levels of complexity. In Chapter III the data sources and a method for updating the census on a yearly basis are identified. Finally, the appendices and support material that follow these chapters include a glossary as well as a description of the current HAP and Section 701 housing element requirements as they apply to local housing needs analysis.

This handbook represents the completion of the current research contract by HR&D with DLGA. This edition contains revisions and additions to the first draft published in December 1975. The revisions are based on feedback from the users of the first draft. The basic methodology and format of the first draft were well received by local users. The major changes are greater detail in some sections, corrections and rewriting for clarity throughout, indexing, crossreferencing, and expanded definitions and background material. This includes four appendices and a 12 page Glossary.

Three planning agencies, representing a cross-section of Illinois counties, were specifically chosen as test sites in which we monitored the use of the handbook.²

²The agencies are Tri-County Regional Planning Commission representing Peoria, Tazewell and Woodford counties, the South Central Illinois Regional Planning and Development Commission representing Effingham, Fayette and Marion counties, and the Lake County Planning Commission.

They suggested the bulk of the revisions; and we are in their debt. Additional feedback came from local governments that have either received the handbook directly from HR&D or that attended a two-day conference covering the handbook, presented in January 1976, by the Department of Urban and Regional Planning of the University of Illinois in conjunction with DLGA and HR&D. Over 120 handbooks have been distributed, 80 in Illinois; 35 counties and 10 regional agencies received data packages and began to use one or more levels of the data analyses described in the handbook during the five months after the first draft was published. Users of this edition of the handbook are also invited to suggest additional changes to further clarify, simplify, or otherwise improve the handbook in any future revisions.

CHAPTER I How to Use the Handbook

This chapter answers three broad questions about housing needs analysis. First, what is a housing model? Second, what are housing needs and how are they measured? And third, what are the essential characteristics of the Illinois housing model developed by the designers of this handbook? After these three questions have been discussed, the overall layout of the handbook and several levels of housing needs analysis are described.

The reader who is wary of the term "model" will be relieved to learn that the Illinois housing model does not involve a complicated set of mathematical formulas. Rather, this housing analysis is a model in that it simplifies the complex interrelationships found in the real world down to a few critical components. These components describe a county's households, the types of housing units these households may occupy, and housing needs. Depending upon a county's planning requirements and time and money constraints, the analysis can be undertaken at one or several levels of detail. Moreover, every level of housing needs analysis described in this handbook is based upon a common model of the housing market.

For those readers with absolutely no experience or training in housing market analysis, who may encounter some problems due to the brevity of the explanations or some of the technical terms, a glossary is provided at the end of this document.

What Is a Housing Model?

A model, as the reader is probably aware, is a simplification or simulation of reality. A successful model uses a small number of key variables and the relationships between these variables to accurately explain a complex set of real phenomena. For example, a scale model of a building constructed from cardboard is far from an exact replication of the real building, yet it allows the architect to accurately observe lighting, aesthetic balance, and the interrelationships of the real building's spaces.

Although the knowledge of a very large number of social, economic, and physical variables would be required to model the functioning of the housing market with perfect accuracy, a small number of key variables, if correctly identified and interrelated, can provide a level of accuracy useful for planning purposes. If these critical variables can be measured and monitored on a yearly basis, the analyst can observe changes in the housing market. For example, he/she may be able to detect that the number of substandard housing units is increasing, decreasing, or unchanged. Analysts can also use housing models to trace the social and economic impacts of planning actions and to help determine whether or not these actions are having desired results.

What Are Housing Needs? How Are They Measured?

As suggested in the Introduction, housing needs are generally defined as shortages and inadequacies in the local housing stock resulting in the rapid deterioration of that housing stock and stressful living environments. A housing

needs measure is a variable or combination of variables that indicates the existence of or signals the potential development of one or more of these housing conditions.

Needless to say, no universal agreement exists as to which housing needs measures best indicate what public action to alleviate an undesirable housing situation should be initiated nor what actions, if any, can solve particular housing problems. At this point the local planning official must rely on his/her best judgment and personal knowledge of the local housing market. All of the measures discussed in this handbook, and the model as a whole, are tools or aids intended to help the local decision maker assess the situation at hand and arrive at a plan of action. In this vein, the handbook attempts to provide several planning options while retaining as great a degree of comparability among these options as possible.

A Housing Needs Model for Illinois

In this section, the housing needs model developed by the Housing Research and Development Program at the University of Illinois for the Illinois Department of Local Government Affairs is described. The model's most important variables and housing needs measures are discussed, and the overall analysis is outlined. Also, several sources of data are identified. The exact procedures for using four different census data bases and a wide variety of update data to implement the Illinois housing needs model are set forth in Chapters II and III.

The basic geographic unit of analysis. The county constitutes the smallest geographic unit for which the handbook is currently designed to be used. The county was selected because it is the only geographic jurisdiction for which data are available throughout the State, making possible both local and statewide data collection. (Some data are available for SMSAs, which may include several cities and counties, and some for cities over certain sizes, which would not give uniform profiles statewide.) Wherever possible, the county is divided into urban and rural areas. Hence, for the large number of counties with only one urban municipality or market area, this handbook also provides a basis for initial municipal analysis.

Additionally, county data can be aggregated to form SMSA and regional data bases, to characterize clusters of similar counties, and to obtain statewide totals. The State of Illinois expects to undertake such large-scale aggregations and regional governments may wish to do likewise.

The Model's Major Components. All of the important characteristics that describe the housing market are separated into two groups -- the Housing Unit and the Household Unit.

THE HOUSING UNIT. Housing units are classified according to key characteristics that past research has shown best describe the current housing stock and changes in that stock. These characteristics are called housing variables because they may assume "values" that vary from one housing unit to another. For example, occupied housing units can be classified according to "tenure status," and the "values" that this variable may assume are renter-occupied and owner-occupied. Combinations of key characteristics describe the most important ways in which one housing unit may differ from another. In addition to tenure status, for example, housing units may have varying structural characteristics (e.g.,

single-detached or multi-unit buildings) and different numbers of rooms, and they may command unequal prices or rents.

Chapter II will describe several sets of housing variables useful in housing needs analysis. In general, as the number of variables and the values they can assume increase, the data become more difficult and costly to assemble and analyze.

THE HOUSEHOLD. In a similar manner, household units are classified by key characteristics or variables that best describe families, individuals, and groups of individuals who buy or rent housing units. For instance, the age of the head of household, the number of persons in the household, the household income, and the race and cultural heritage of the members of the household can all vary. Sets of these and other variables describing household units also are presented in Chapter II.

Measures of housing needs. In the Illinois housing model, measures of housing need are grouped into three broad categories: structurally substandard housing units; excessive housing costs; and overcrowding.

SUBSTANDARD UNITS. Housing units "lacking some or all plumbing facilities" are classified as structurally substandard. A unit is defined as lacking some or all plumbing facilities if it does not have any or all of the three following elements: a) hot and cold piped water; b) flush toilet for the exclusive use of its occupants; and c) a bathtub or shower for the exclusive use of its occupants. This guideline was used as the primary indicator of substandardness of the 1970 census. It is an objective criterion that eliminates enumeration problems caused by subjective evaluations of structural deficiencies. Overall, it yields a conservative estimate of substandardness.

The 1970 census did not enumerate numbers of dilapidated or deteriorating units, and there is at present no methodology by which accurate deterioration and rehabilitation rates can be derived without a sizeable cost (particularly in larger counties). Simple walking and windshield surveys to estimate deterioration and rehabilitation are discussed in Chapter III.

EXCESSIVE HOUSING COSTS. The following standards are utilized in determining excessive expenditures for housing. Renter households paying more than 25% of their total income in gross rental costs are viewed as paying too large a share of their income for housing services. Similarly, households in owner-occupied housing units whose value exceeds 2.5 times current family or household income are deemed to be paying a disproportionately high cost for housing. No matter how high their housing costs, households whose incomes exceed \$20,000 are not considered to be suffering a housing problem with respect to cost/income ratios. High income households which allocate a relatively large share of their income to housing are assumed to do so by choice and, further, their remaining income is assumed to be sufficient to meet other basic household needs.¹

¹Measures of excessive housing costs for owners may overestimate the number of older homeowners who pay excessive amounts for housing because it counts households which have paid off their mortgage (and thus may have rather low monthly costs) but whose home is valued at more than 2.5 times annual household income. This may be a problem in counties with large numbers of homeowners.

These cost standards closely parallel those incorporated into federal housing assistance programs. They also reflect the "rules of thumb" relied upon by real estate brokers nationwide in determining whether or not individual households can afford to rent or purchase specific housing units.

OVERCROWDING. Overcrowding constitutes the third dimension of overall housing needs. In the Illinois housing model, a household is considered to be overcrowded if there is less than one room per person in the housing unit it occupies. Kitchenettes, pullman kitchens, bathrooms, porches, balconies, halls, utility rooms, and unfinished attics or basements are not counted as whole rooms for purposes of this definition. Minimal overcrowding is expressed mathematically as 1.01 persons per room; severe overcrowding is defined as 1.51 or more persons per room. These standards are widely acknowledged, precisely defined, and measurable. They also correspond to the definition of crowding as specified in federal housing legislation.

The above definitions form the core of the housing needs measures used in this analysis. Still, in certain instances they may be modified to take account of the existing housing data or special local housing conditions. For example, as will be explained, the analyst who relies solely upon the first of the four data bases described in Chapter II must define overcrowding as more than 1.25 persons per room and employ a different definition of excessive housing costs for owner-occupied units. These and other modifications or possible extensions of the housing needs measures defined here are set forth in Chapter II.

The overall Model. The basic model consists of two major parts. First, a base matrix that crosstabulates housing unit and household variables is constructed. This matrix describes each household living in each housing unit according to a number of key characteristics; for example, the matrix may show that two 5-person households whose incomes lie between \$7,500 and \$9,999 may rent 4-room apartments for \$275 gross monthly rent. Second, selected standards of housing needs are identified and these measures are used to quantify housing needs in terms of the number and types of units affected by these conditions as well as the types of households occupying those units.

Ideally, the analyst would wish to crosstabulate housing unit and household characteristics on an annual basis and to quantify annual changes in housing needs. In fact, at present most housing needs as defined in this analysis cannot be measured yearly using existing data, nor can many housing unit and household characteristics be annually crosstabulated. We can, however, develop a comprehensive picture of the housing market in 1970, the most recent decennial census year, as well as a picture of the changes that have occurred since that year in the housing stock. At a minimum, new units can be enumerated by structural type, costs, and total numbers of units. Additionally, we can examine changes in the demand for these housing units and the ability of various households to purchase or rent these units. In this way, we can infer that the housing needs as measured in the census year are likely to have increased, decreased, or remained unchanged.

There is a similar problem in counties with a large number of younger but upwardly mobile households who buy homes valued greater than 2.5 times their income by choice based on their expectations that they will only do so for the first year of ownership. In so far as their expectations are correct, such upwardly mobile households would be considered lower priority in measuring need for housing assistance.

Accordingly, the analysis is divided into two parts: 1) the 1970 base analysis and 2) update data since 1970. Chapter II describes how to use four different census data bases to derive housing needs in 1970. Chapter III identifies a method and the data sources for updating the census on a yearly basis.

The Illinois housing model incorporates a high degree of flexibility both in terms of the level of analytic complexity and the design of the base matrix and needs measures. Several levels of analysis and a number of measures of housing needs are presented in order that the local analyst can choose to implement those features of the model that best fit the parameters of his/her local housing problems. The base matrix can be easily adjusted to describe the special housing characteristics that delineate each of six different county types as defined by housing and demographic variables. Still greater flexibility, which can be gained through the use of several different data bases, will be discussed in the following section.

The model's adaptability notwithstanding, it bears repeating that every level of needs analysis described in this handbook is based upon a common model of the housing market. In this manner, the model can fit not only the several types of county housing patterns and the varying extent of local analysis required but also meet the objective of monitoring housing trends statewide.

The data. The data used in this handbook can be divided into two sections: the base data covered in detail in Chapter II and the update data covered in detail in Chapter III.

THE BASE DATA. Diagram 1 summarizes the base data which is taken from four different samples of the 1970 U.S. census. These four different samples allow for four different levels of housing needs analysis.

Level 1. The data base for the first level of analysis consists of a special crosstabulation created by the census for the U.S. Department of Housing and Urban Development (HUD) to aid county planners wishing to undertake a housing needs analysis. As Diagram 1 shows, the HUD crosstabulation identifies only one measure of housing need, a composite of the four separate measures presented in Levels 2 through 4 (Diagram 1). This composite measure is called housing "inadequacy." Any household suffering at least one of the four measures enumerated in Levels 2 through 4 is included, and that household and its housing unit is described by five household and housing variables. This five-variable crosstabulation gives a good initial picture of which renters and owners live in inadequate housing units. Level 1 of Chapter II shows how to obtain and interpret this data base.

Level 2. The second level of analysis introduces two data bases -- the 1st and 4th Counts of the 1970 census. Although both Counts provide new information, the 4th Count includes far more crosstabulations of housing needs than does the HUD data base. The First Count, a 100% sample, is introduced as a comparative tool with which to check for sampling errors in the data presented in all of the smaller samples.¹

The primary analytic gain at this level over the HUD data is the separate analysis of the housing needs measures lumped under the term "inadequacy" in

¹A more complete description of what we call "multi-level analysis" to check sampling errors is found in Chapter II and at the end of this chapter.

SUMMARY OF THE BASE DATA

Diagram 1

Level of Analysis Description	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
SAMPLE NAME	HUD	1st & 4th counts	Public Use	Public Use
SAMPLE SIZE	20%	100% & 20%	1 in 100 households (1/5 of 5%)	1 in 100 households (1/5 of 5%)
AREAL LEVEL OF DISAGGREGATION	102 counties	102 counties plus some urban/rural	30 counties	6-8 counties
INDICATORS OF HOUSING NEED	1: composite measure "inadequacy"	4: crowding rent/income ratio lacking plumbing age/value structure	4: crowding rent/income and value/ income ratios lacking plumbing age/value structure	4: crowding paying too much lacking plumbing age/value structure
HOUSING AND HOUSEHOLD VARIABLES USED	5: race tenure household size age, eldest member income	Varies from table to table: race tenure household income housing value number of rooms	8: race tenure household size age, household head income housing value/rent number of rooms housing type	Same as Level 3 plus additional variables as needed
CROSSTABULATION NEEDS BY VARIABLES	By all 5 variables	Many separate crosstabs: range 1 to 4 variables	By all 8 variables	By all variables needed
SCALING OF NEED MEASURES	None	Crowding paying too much	Crowding paying too much	Finer scaling as needed
DETERMINATION OF MULTIPLE HOUSING NEED	None	Crowding lacking plumbing	Combinations of all 4 needs measures	Combinations of all 4 needs measures

Table 1. Who Should Use the Public Use Sample

Counties Which Should Use the Public Use Sample

Champaign	*Kane	Tazewell
*Cook	*Lake	Vermillion
*Du Page	*Madison	*Will
Jackson	*Peoria	Williamson
	*St. Clair	*Winnebago

Counties Which Can Choose to Use the Public Use Sample

Adams	De Kalb	Monroe
Franklin	La Salle	Randolph
Jefferson	McHenry	Rock Island
Kankakee	McLean	Sangamon
Knox	Macon	Stephenson
		Whiteside

Counties Which Should Not Use the Public Use Sample

Alexander	Greene	Mercer
Bond	Grundy	Montgomery
Boone	Hamilton	Morgan
Brown	Hancock	Moultrie
Bureau	Hardin	Ogle
Calhoun	Henderson	Perry
Carroll	Henry	Piatt
Cass	Iroquois	Pike
Christian	Jasper	Pope
Clark	Jersey	Pulaski
Clay	Jo Daviess	Putnam
Clinton	Johnson	Richland
Coles	Kendall	Saline
Crawford	Lawrence	Schuyler
Cumberland	Lee	Scott
De Witt	Livingston	Shelby
Douglas	Logan	Stark
Edgar	McDonough	Union
Edwards	Macoupin	Wabash
Effingham	Marion	Warren
Fayette	Marshall	Washington
Ford	Mason	Wayne
Fulton	Massac	White
Gallatin	Menard	Woodford

*Only counties advised to undertake Level 4 analysis.

the HUD data. The reader will find that the separate delineation of these needs is an aid in specifying those programs and actions, if any, that the public planner should pursue to alleviate housing needs. One loss of information in moving from Level 1 to this level is that the 1st and 4th Counts do not crosstabulate housing needs by as many housing unit and household variables as does the HUD data base.

Level 3. The data base used in both Levels 3 and 4 is called the Public Use Sample. The unique difference between this and the previous data bases is that here all of the census data are presented for individual households rather than in "fixed" tables that crosstabulate only some housing needs by some housing unit and household characteristics. The user of the Public Use data can describe any combination of housing needs measures by any combination of housing and household characteristics available from the census.

Level 3 presents the Public Use Data to the local county analyst in a "special fixed" matrix created by the designers of this handbook. This fixed matrix differs from the fixed tables at previous levels of analysis in that it includes and interrelates all the major housing needs measured by all of the major housing unit and household variables. Moreover, five different fixed matrices are provided in order to fit the varied concentrations of population and housing market conditions found in Illinois counties.

Like all other data bases, the Public Use Sample has drawbacks. By law, Public Use Sample data cannot be disclosed for counties or county groups of less than 250,000 population, and because of the small size of the sample (1 of every 100 households, i.e., one-fifth of the 5% census sample), the data are prone to sampling errors. The areal size limitation has been partially overcome by an estimating formula that allows Level 3 data to be used in 30 of the larger counties.¹ However, because of this estimation procedure the sampling error is compounded in some of the smaller of the 30 counties. These counties especially, but also all other users of the Public Use Sample, are asked to compare aggregated results with their equivalent in the larger samples.²

Those counties which should, from a statistical point of view, use the Public Use Sample, those who can choose to use it, and those which should not use it are listed in Table 1 of this Chapter. The 72 counties which are advised not to use the Public Use Sample usually will be limited to the first two levels of analysis. However, as will be discussed in Chapter II, in some instances regional planners may be able to undertake a Level 3 analysis for a group of counties that lie within their planning region or for the planning region as a whole.

Level 4. This level also uses the Public Use data. Additional housing and household variables and finer measures of housing needs are introduced at this level. Only the nine largest counties which individually have populations close to or above 250,000 can safely (in a statistical sense) undertake such fine crosstabulations. On the other hand, only these largest nine counties

¹For further discussion, see Section B, Chapter IV in Monitoring Housing Needs in Illinois: An Ongoing Housing Market Analysis Model, Housing Research and Development Program, University of Illinois at Urbana-Champaign, and Chapter II of this report.

²Further discussion may be found in the last section of this Chapter and in Chapter II.

SUMMARY OF THE UPDATED DATA

Diagram 2

Level of Analysis Description		LEVEL 1	LEVEL 2	LEVEL 3
LEVEL	NAME	Existing Local Secondary Data	Extended Secondary Data	Primary Data
SAMPLE	SIZE	Variable	Variable	5% to 15%
AREAL LEVEL OF DISAGGREGATION		All 102 counties urban/rural	Variable	Depends on staff and funds
DATA		Already existing or easily assembled by the analyst from county, state, and federal sources	Exists but not in a form readily available or useable. Requires longer range sampling and negotiations at both state and local level.	Does not exist. Original data collected by surveying households.
HOUSING NEEDS MEASURED		None: In effect a Market analysis updating housing supply and demand. Changes in housing need inferred from changes in the condition of the housing market.	Some: Rural counties begin to measure some changes in crowding and paying too much. All inferential changes in housing need by Supply/Demand analysis improve.	Some or All: As cost of surveys is high, may want to limit to a few needs. In theory could repeat smaller census samples.
HOUSING AND HOUSEHOLD VARIABLES USED		Varies by county and supply/demand component. Typically: age of head of household housing value housing type tenure household size	Similar to Level 1	Some or All: Similar to above
CROSSTABULATION SCALING AND MULTIPLE HOUSING NEED		None	Some crosstabulation and multiple needs analysis possible.	Some or All: Similar to above

have both the diversity of housing and household characteristics and magnitude of housing needs to warrant such refined analysis.

THE UPDATE DATA. The update portion of the handbook is summarized in Diagram 2 and described in detail in Chapter III. Ultimately, three different levels of update analysis are planned, each employing more complex data sources than the last. At present only the first level is totally operational.

Level 1. As is shown in Diagram 2, various data sources are used in the first level of update analysis. These data sources are distinguished by the fact that they are sources of secondary data that already exist and/or are easily assembled in each county or data that are published and readily available from a state or federal agency.

These data do not include updates of housing needs as none are readily available (in terms of reasonable cost in time and money). Instead, the data yield a housing market analysis, that is, an analysis of changes in the standing stock and new supply of housing and changes in the demand for housing due to changes in the number and composition of county households. By updating and interrelating housing supply and demand, we can estimate whether changes in the housing market have increased, decreased, or had little effect on the housing needs enumerated in the Base analysis (the 1970 census). For example, if the new demand for housing units is greater than the increased supply, and vacancy rates are low while the median cost of housing is rising faster than the median income of households, then there is a strong likelihood that the number of households suffering from overcrowding and excessively high costs relative to income, and the number of occupied substandard units, have all increased.

Level 2. The second level of housing update analysis is an extension of Level 1. Different sources of secondary data that may augment or even replace Level 1 sources are identified. However, in all cases these data are not as easy to assemble or readily available as those used in Level 1.

Overall, Level 2 sources are more reliable and comprehensive and can produce a more complete and accurate analysis of the housing market. In some cases housing needs can be updated. This is especially true in rural counties where the volume of housing units, range of household characteristics, and changes in housing stock and household demand are more easily enumerated than they are in highly urbanized areas.

Local efforts at this level will range from gathering information from various local experts (realtors, landlords, etc.) to negotiations with utility companies. At the state level, efforts are already underway to assemble data from state and federal agencies that can be made available to local analysts. As counties begin to undertake housing update analyses and request and use the data assembled by the state, the rationale for additional data collection and storage by state agencies will evolve, and Level 2 analysis will become less expensive, easier to undertake, and also more complete.

Level 3. Level 3 involves primary rather than secondary data collection and analysis. The cost of developing, administering, and analyzing lengthy surveys or questionnaires is prohibitive in terms of time, money, and staff size for all but a few counties. For that reason, Level 3 has a lower priority than the first two levels and is only being considered as a future project.

At least two types of distinctly different primary data collection and analysis could be undertaken. The first is a limited sample survey or questionnaire that would supplement secondary data collected at Levels 1 and 2. The second is a more complete local housing census that would sample a cross-section of the local households and could update the national census directly.

Analyzing Housing Needs: The Multi-Level vs. Single-Level Approach

The different levels of analysis (both existing and planned) presented in this handbook are designed so that each successive level builds upon all of the previous levels of analysis. The update data augment the base data analyses. The levels within both the base and (planned) update analyses are designed to build one upon the other.

This increasing complexity can serve both as a useful learning device and as a means of improving the accuracy of the data and the quality of housing needs analysis. Nonetheless, the designers of the handbook recognize that local county analysts may want to or, because of time, money, and staff constraints, are forced to undertake just one level of analysis. Thus, while the handbook is designed with a multi-level use in mind, the separate levels of analysis also can accommodate this real, pragmatic need for a single-level approach.

The use of both the single-level and multi-level analyses for the base data are presented in Diagram 3. Hexagon shapes indicate warnings or key recommendations in the use of the various levels of analysis.

The advantages of the multi-level approach are threefold. First, when the housing analyst goes through each level of analysis starting from Level 1, he/she sees, in a logical progression, how housing and household variables define local housing needs as well as the uses of varying types of housing needs measures. Second, the multi-level approach can serve as a learning device and teaching process both for the analyst directly and in communications with elected officials and citizen groups. Third, and perhaps most important, the various data samples provide a check on potential sampling errors and errors in the Public Use estimates of county housing characteristics. Even the accuracy of the 1st count 100% census sample has been questioned by some county and city officials. By analyzing three or four different samples, the analyst is provided with a range of data estimates. Admittedly, if this range is very large, the local analyst is faced with a new dilemma, that of deciding which point in the range is most accurate. In such cases, the analyst may have to rely upon his own expert knowledge of the county or upon a consensus of "experts" such as realtors, property inspectors and/or appraisers, other planning and housing officials, elected officials, and citizen groups.

BASE DATA ANALYSIS

ADVANTAGES OF MULTILEVEL OVER SINGLE LEVEL

SINGLE LEVEL

MULTI - LEVEL

Provides a simple quick overview of amount of inadequate housing for all counties

LEVEL 1

Provides a good basic needs analysis especially for smaller counties

LEVEL 2

Best Base analysis for the largest counties

LEVEL 3

Not recommended as a separate analysis for any county except the largest 9

A. Provides a systematic analytic process:
a. for building the complexity of housing and household variables
b. for building the complexity of housing needs measures

B. Provides a useful learning/teaching process:
a. for inexperienced planning staffs
b. for communications with local community

C. Different sample sizes provide an analytic tool:
a. to compare sampling errors
b. to check estimation of county characteristics in Level 3

Where large differences exist local expertise must be used to choose best data source

Recommended for 72 smaller counties
See Table 1, p. 7.

LEVEL 1 - 2

Recommended for 30 larger counties
See Table 1, p. 7.

LEVEL 1 - 3

Recommended for nine largest counties
See Table 1, p. 7.

LEVEL 3 - 4

CHAPTER II The 1970 Census Data Base Analysis

Chapter II presents four levels of housing needs analysis. All of the levels of analysis rely upon the 1970 Census of Population and Housing. However, each level utilizes a different census sample or data format. The data base for Level 1 consists of a special crosstabulation of housing and household characteristics created by the census for the Federal Department of Housing and Urban Development. Published census reports and 1st and 4th Count summary tape data are used in Level 2. The data base used in both Levels 3 and 4 is called the Public Use Sample. Level 3 presents the Public Use data in a special fixed matrix created by the designers of this handbook. In Level 4, the analyst can crosstabulate any combination of housing needs measures by any combination of housing and household variables available from the Census.

When the handbook was initially designed, we had in mind that each level of analysis be a self-contained unit that could be completed without reference to any other level. After testing the handbook in the field, we find that most local analysts complain about an overload of data when starting at level 3 or 4, and in some cases are confused or lost by the detailed disaggregation of submarkets. Therefore, we now highly recommend undertaking all levels possible in the order presented so as to build the depth of knowledge and detail analysis. As discussed in Chapter I, when utilized in this manner each of the four levels will provide a more complete and understandable picture of the county's housing needs. For example, Level 1 data present a good initial description of the county's overall housing needs, but they do not specify individual housing problems. To identify specific needs and the households who face these needs, the analyst must undertake a Level 2 or Level 3 analysis. Finally, Level 4 enables the analyst in a very large county to carry out a still more refined analysis of that county's housing problems.

Levels 1-4 of the 1970 census data base analysis are discussed in detail in the following sections of this Chapter. While information with respect to overall housing market conditions is presented, particular emphasis is placed upon documenting the county's housing needs. For each level, the relevant census samples and data formats are identified and described. The advantages and disadvantages of the analysis as well as, where applicable, possible alternative procedures of data handling are discussed. In many instances, formats for tables to be completed by the analyst are included, and data for the State of Illinois displayed. The State data are presented to provide reference points for analysts wishing to evaluate their county's housing problems relative to those statewide. In short, at each level the data tables and accompanying text are designed to enable the analyst to readily document the magnitude of housing needs within the county in 1970 and to assess the relative severity of these problems for various household types. The findings from these census data base analyses can suggest directions in which housing assistance programs might be developed and areas of analysis upon which an update analysis of housing needs should concentrate.

Level 1: The HUD Data Base

Coincident with the passage of the 1974 Housing and Community Development Act, the Federal Department of Housing and Urban Development (HUD) commissioned the Bureau of the Census to create a special crosstabulation of housing and household characteristics to aid county planners who wished to apply for the newly authorized federal housing funds. This special HUD tabulation serves as the Level 1 data base. The HUD data are derived from a 20% census sample and are available for each of the 102 Illinois counties. Computer printouts of the Level 1 HUD data can be obtained from the Department of Local Government Affairs.

The HUD data are presented in a fixed format as shown in Tables 1A-1H for the State of Illinois. Each county's computer printout, like the printout for the State, actually consists of eight tables, one each for total owners, total renters, white owners, white renters, Negro owners, Negro renters, Spanish-American owners, and Spanish-American renters.

Overall, each county's households are described by five household and housing unit variables -- race, tenure, income, age of oldest person, and number of persons in the household. These variables are defined below, and the various income, age, and household size categories are shown in Tables 1A-1H.

Tenure. Units may be either owner-occupied or renter-occupied. No vacant units are enumerated.

Race. Three categories are displayed: White, Negro, and Spanish-American. Negro does not include persons of all other races excluding white: the analyst who wishes to enumerate data for "Negro and all other non-whites" must subtract data for whites from total figures. Spanish-Americans constitute an entirely independent category. The tables for Spanish-Americans are based on a 15% sample while all other tables are derived from a 20% sample.

Age of Oldest Person. Two age categories are displayed: less than 62 or 62 or more. The oldest person may or may not be the head of the household.

Household Size. Number of persons in the household. Three- and four-person households are combined as are all households of six or more persons. No group quarters data are included in the HUD tabulation.

Income. Income classes are determined by household, not family, income. In general, household incomes exceed family incomes.

Three unusual features of the data should be noted. First, the data are enumerated according to the age of the oldest person in the household, not the age of the head of the household. Hence, the classification "62 or older"

identifies both households in which the head of the household is 62 years of age or older and those households which have an elderly person residing with them (but are headed by a younger person). Second, three- and four-member households are combined into one household size category. Third, crowding is enumerated at greater than 1.25 persons per room when greater than 1.01 persons per room and greater than 1.51 persons per room are the most widely used measures.

The HUD data identify only one measure of housing need. This measure, called housing "inadequacy," is defined as follows:

A housing unit is an inadequate unit if:

- 1) the unit lacks one or more of the following plumbing facilities: hot piped water; flush toilet for the use of the household only; or bathtub or shower for the use of the household only
- OR 2) there are more than 1.25 persons per room
- OR 3) in renter-occupied units, gross rent exceeds 25% of household income
- OR 4) in owner-occupied units, the structure was built in 1939 or earlier and is valued below \$7500 outside SMSAs or \$10,000 inside SMSAs.

All occupied units found to fall into one or more of the above categories are enumerated as inadequate units. Units that fall into more than one of the above categories are only counted once; thus eliminating double counting or overlaps. All other occupied units are tabulated as having adequate conditions.

In many ways, Level 1 data provide a better picture of a county's 1970 housing market and the overall magnitude of county housing needs than can be obtained from published census reports (see Level 2). For those counties which cannot take advantage of the Public Use Sample (Levels 3 and 4), Level 1 data provide the only available detailed crosstabulation of housing and household variables. Moreover, Level 1 data alone allow the analyst in a small county to simultaneously identify a relatively large number of the characteristics of households who occupy inadequate housing units.

Level 1 data suffer several shortcomings, however. Most importantly, the HUD data identify only one measure of housing need. There is no way to determine how many or what kinds of households are suffering particular housing problems. For example, while previous analysis has shown that low-income households are more likely to be living in housing units with inadequate plumbing than are households at the upper end of the income spectrum, the HUD data do not allow the analyst to verify these findings in the individual county. Similarly, households facing excessive housing costs or living in overcrowded units cannot be separately enumerated. Moreover, the analyst cannot determine how many households face more than one housing problem (e.g., live in substandard units and are overcrowded), nor is he/she free to consider alternative measures of housing deprivation. Finally, the number of inadequate units is not disaggregated by rent and value categories, and, in some cases, variable definitions are not consistent with those utilized at other levels of this analysis.¹

¹See, for example, discussion on page 45.

Tables 1A-1H

Level 1 Data -- State of Illinois

Table 1A	Numbers of Households, Total Owner-Occupied.
Table 1B	Numbers of Households, Total Renter-Occupied.
Table 1C	Numbers of Households, White Owner-Occupied.
Table 1D	Numbers of Households, White Renter-Occupied.
Table 1E	Numbers of Households, Negro Owner-Occupied.
Table 1F	Numbers of Households, Negro Renter-Occupied.
Table 1G	Numbers of Households, Spanish-American Owner-Occupied.
Table 1H	Numbers of Households, Spanish-American Renter-Occupied.

Source: HUD special tabulation.

INACADE CATEGORIES

INADEQUATE CATEGORIES	62000- 62999	63000- 64999	65000- 67499	67500- 69999	610000- 619999	615000- 619999	620000- 629999	630000- 639999
WLOEST PERSON LESS THAN 62								
1 PERSON MM	1247	2554	2440	1309	495	54	29	11750
2 PERSON MM	970	2771	5324	1786	4404	942	349	21450
3-4 PERSON MM	719	2633	6549	7404	6773	2435	1101	30715
5 PERSON MM	142	705	2249	2544	2910	987	417	10240
6+ PERSON MM	457	2044	6235	6924	19440	8681	5447	33771
COLUMN TOTAL	3577	10779	22437	26010	36449	13544	7392	127430
INADEQUATE CATEGORIES								
WLOEST PERSON 62 MM 62000								
1 PERSON MM	5342	3426	1427	545	323	110	62	38001
2 PERSON MM	4214	11191	6924	3922	2434	433	275	42921
3-4 PERSON MM	941	1424	2400	2061	2541	1144	509	12321
5 PERSON MM	104	359	252	327	192	163	154	1603
6+ PERSON MM	75	359	452	604	1446	1146	1092	5352
COLUMN TOTAL	14730	17166	11457	7479	7320	2446	2113	100478
ADEQUATE CATEGORIES								
WLOEST PERSON LESS THAN 62								
1 PERSON MM	4324	11410	17324	11724	4614	2156	1704	70317
2 PERSON MM	3942	11497	30710	45345	99077	52521	37076	204234
3-4 PERSON MM	3454	12495	39513	43733	213724	115402	44110	570444
5 PERSON MM	1244	3174	11332	27404	41310	4515	34164	211746
6+ PERSON MM	406	2514	8235	19514	43941	39070	36424	172946
COLUMN TOTAL	14074	41744	107114	168232	447669	253465	204409	1313917
ADEQUATE CATEGORIES								
WLOEST PERSON 62 MM 62000								
1 PERSON MM	20047	21470	12409	4031	5104	1624	1434	123449
2 PERSON MM	24934	47457	47055	34421	46121	17140	16714	263722
3-4 PERSON MM	2268	6224	10442	14020	31474	22464	21424	111714
5 PERSON MM	164	434	912	1891	4004	5061	4144	21740
6+ PERSON MM	44	297	793	1386	5046	5143	7144	20102
COLUMN TOTAL	47542	75444	72831	41744	93771	51477	55577	534747
PAGE COLUMN TOTAL	79922	145227	214243	283470	605444	321473	273972	
TOTAL FOR THE PAGE	2040992							

INADEQUATE CONTRIBUTIONS		ADEQUATE CONTRIBUTIONS		INADEQUATE CONTRIBUTIONS		ADEQUATE CONTRIBUTIONS	
OLDEST PERSON LESS THAN 62	62-64	65-69	70-74	OLDEST PERSON 65 OR OVER	75-79	80-84	85-89
1 PERSON MH	11125	22590	21045	6180	54000	57500	51000
2 PERSON MH	7241	15019	13570	4070	37497	34990	31497
3-4 PERSON MH	7401	15032	14031	9730	9730	9730	9730
5 PERSON MH	1414	3219	3715	1940	1940	1940	1940
6+ PERSON MH	1257	4522	5534	5630	5630	5630	5630
COLUMN TOTAL	20000	61441	64317	29070	18057	2224	27942
INADEQUATE CONTRIBUTIONS							
OLDEST PERSON 65 OR OVER							
1 PERSON MH	18145	15593	7191	1747	814	101	10541
2 PERSON MH	8037	11041	7414	2104	1517	101	5400
3-4 PERSON MH	89	1170	1192	645	504	174	1400
5 PERSON MH	125	115	160	31	130	50	140
6+ PERSON MH	95	222	247	85	432	250	1417
COLUMN TOTAL	84250	30247	14252	5507	3202	711	150240
ADEQUATE CONTRIBUTIONS							
OLDEST PERSON LESS THAN 62							
1 PERSON MH	1094	3477	24694	27701	23954	5244	112503
2 PERSON MH	900	3230	28149	30371	49770	32210	145535
3-4 PERSON MH	1121	4017	30715	50451	74344	17040	214277
5 PERSON MH	300	1051	7430	11004	18911	4754	51124
6+ PERSON MH	271	943	4511	6895	12165	430	32051
COLUMN TOTAL	4214	22436	95007	151722	204144	17551	504207
ADEQUATE CONTRIBUTIONS							
OLDEST PERSON 65 OR OVER							
1 PERSON MH	2534	5340	4522	6130	4401	1320	36334
2 PERSON MH	1431	5277	10985	12491	16000	4047	31024
3-4 PERSON MH	159	820	2327	3620	7140	4074	22943
5 PERSON MH	10	53	401	1177	1177	730	3274
6+ PERSON MH	14	48	102	314	704	507	2525
COLUMN TOTAL	7774	11542	22194	22966	30214	13406	126516

INCOME CATEGORIES									
	45000-	50000-	55000-	60000-	65000-	70000-	75000-	80000-	TOTAL
INADEQUATE CONDITIONS									
WIDEST PERSON LESS THAN 20									
1 PERSON MM	144	142	11						127
2 PERSON MM	244	341	297						1311
3-4 PERSON MM	160	423	377						1430
5 PERSON MM	74	122	121						724
6+ PERSON MM	377	1124	1460						2561
COLUMN TOTAL	1179	2251	2404						12773
ADEQUATE CONDITIONS									
WIDEST PERSON LESS THAN 20									
1 PERSON MM	114	25	14						1379
2 PERSON MM	123	275	154						1313
3-4 PERSON MM	174	211	151						492
5 PERSON MM	14	42	44						224
6+ PERSON MM	104	126	117						1064
COLUMN TOTAL	449	680	444						2534
ADEQUATE CONDITIONS									
WIDEST PERSON LESS THAN 20									
1 PERSON MM	621	1141	710						4435
2 PERSON MM	1270	2307	2444						13772
3-4 PERSON MM	394	3314	4344						2952
5 PERSON MM	501	1150	1456						11003
6+ PERSON MM	501	1604	2474						14002
COLUMN TOTAL	3933	9712	12144						21412
ADEQUATE CONDITIONS									
WIDEST PERSON LESS THAN 20									
1 PERSON MM	344	204	142						527
2 PERSON MM	1414	1406	1324						334
3-4 PERSON MM	114	1145	1233						1102
5 PERSON MM	102	204	326						354
6+ PERSON MM	44	244	427						594
COLUMN TOTAL	3012	4553	4344						2012
PAGE COLUMN TOTAL	4364	16104	14124						14215
TOTAL FOR THE PAGE	9924								4754
TOTAL FOR THE PAGE	114127								

INADEQUATE CONDITIONS

INADEQUATE CONDITIONS WIDEST PERSON LESS THAN 42	52100- 52999	53000- 53999	54000- 54999	55000- 55999	56000- 56999	57000- 57999	58000- 58999	59000- 59999	TOTAL
1 PERSON MM	5001	7157	5300	643	211	14			69487
2 PERSON MM	2724	5192	4550	140	437	74			14154
3-4 PERSON MM	6040	7848	5343	1712	1002	74			35546
5 PERSON MM	2461	3515	2422	492	414	54			10412
6+ PERSON MM	2500	4424	7030	3922	3414	174			31764
COLUMN TOTAL	1715	31414	27413	7404	5444	244			124420

INADEQUATE CONDITIONS WIDEST PERSON 42 OR MORE	14000- 14999	15000- 15999	16000- 16999	17000- 17999	18000- 18999	19000- 19999	20000- 20999	21000- 21999	TOTAL
1 PERSON MM	2442	1414	407	43	24	14			14420
2 PERSON MM	2474	2444	1444	144	44				14444
3-4 PERSON MM	144	1477	1473	144	144	44			4444
5 PERSON MM	144	241	200	44	44	44			744
6+ PERSON MM	247	304	417	214	444	144			1444
COLUMN TOTAL	1444	4414	3542	494	644	144			4444

ADEQUATE CONDITIONS WIDEST PERSON LESS THAN 42	22000- 22999	23000- 23999	24000- 24999	25000- 25999	26000- 26999	27000- 27999	28000- 28999	29000- 29999	TOTAL
1 PERSON MM	44	1419	7114	4374	2231	191			14445
2 PERSON MM	74	1115	5223	7652	4724	54			27464
3-4 PERSON MM	144	1440	7112	9712	15444	1744			34531
5 PERSON MM	54	524	2544	2474	4001	411			12225
6+ PERSON MM	21	444	2122	2717	3442	444			10430
COLUMN TOTAL	411	5154	24254	27331	32494	4034			104954

ADEQUATE CONDITIONS WIDEST PERSON 42 OR MORE	32000- 32999	33000- 33999	34000- 34999	35000- 35999	36000- 36999	37000- 37999	38000- 38999	39000- 39999	TOTAL
1 PERSON MM	140	472	444	344	214	14			2157
2 PERSON MM	54	445	1474	1437	1142	74			5441
3-4 PERSON MM	14	140	744	1420	1917	341			5377
5 PERSON MM	14	44	154	243	412	142			1344
6+ PERSON MM	44	14	74	144	467	241			1130
COLUMN TOTAL	444	1444	3214	3644	4094	741			14259

PAGE COLUMN TOTAL	51436	44433	54437	39143	42774	12774	5454
TOTAL FOR THE PAGE	279344						

INCOME CATEGORIES

	LESS 0	12 000 - 12 499	13 500 - 14 999	15 000 - 17 999	18 000 - 30 000	31 000 - 51 499	52 000 - 72 000	73 000 - 84 000
INADEQUATE CONDITIONS								
POOREST PERSON LESS TOTAL	14	0	7	12	0	1	1	34
1 PERSON MM	15	15	22	14	20	1	1	124
2 PERSON MM	18	17	20	14	17	1	1	124
3-4 PERSON MM	10	0	2	5	12	2	17	330
5 PERSON MM	43	12	6	4	12	2	2	156
6+ PERSON MM	173	121	121	174	142	11	254	2401
COLUMN TOTAL		33	121	473	411	1241	274	3550

INADEQUATE CONDITIONS								
POOREST PERSON LESS TOTAL	21	22	2	30	0	0	0	49
1 PERSON MM	7	22	4	30	0	0	0	117
2 PERSON MM	11	7	4	30	11	0	0	121
3-4 PERSON MM	0	0	5	14	0	0	0	35
5 PERSON MM	0	5	11	4	42	40	11	277
6+ PERSON MM	29	56	45	96	75	52	27	619
COLUMN TOTAL		96	145	246	215	192	47	

ADEQUATE CONDITIONS								
POOREST PERSON LESS TOTAL	49	5	54	45	41	14	0	322
1 PERSON MM	97	34	71	247	312	314	171	1040
2 PERSON MM	173	17	101	721	1243	1043	302	6424
3-4 PERSON MM	52	27	81	237	673	505	417	3617
5 PERSON MM	45	10	80	367	696	414	255	4237
6+ PERSON MM	416	93	432	1557	3014	2755	2222	16906
COLUMN TOTAL		432	1557	3014	2755	2222	2222	

ADEQUATE CONDITIONS								
POOREST PERSON LESS TOTAL	103	21	4	14	8	7	1	199
1 PERSON MM	70	07	154	191	158	70	43	912
2 PERSON MM	24	29	157	133	154	224	172	1025
3-4 PERSON MM	11	0	5	63	34	46	50	303
5 PERSON MM	0	0	0	20	01	127	173	441
6+ PERSON MM	250	137	232	421	419	494	434	2420
COLUMN TOTAL		137	232	421	419	494	434	

PAGE COLUMN TOTAL 806 319 870 2607 4319 8298 3753 3023

TOTAL FOR THE PAGE 20037

INCOME CATEGORIES

	LESS THAN	\$2000-	\$3000-	\$4000-	\$5000-	\$7500-	\$10000-	\$15000-	\$20000+	TOTAL
INADEQUATE CONDITIONS										
WLOEST PERSON LESS THAN 62										
1 PERSON MM	1024	518	1032	623	110		54	14	7	3420
2 PERSON MM	1023	401	1010	673	317		90	7	14	3535
3-4 PERSON MM	1524	1093	2260	1631	597		410	93	52	7665
5 PERSON MM	379	243	645	473	145		134	24	34	2104
6+ PERSON MM	545	340	1254	1581	1214		924	343	147	4449
COLUMN TOTAL	4545	2649	4227	4981	2445		1420	720	241	23217

INADEQUATE CONDITIONS										
WLOEST PERSON 62 OR GREATER										
1 PERSON MM	402	45	41	9	20		8	3	7	640
2 PERSON MM	174	134	147	46	46		7	1	7	679
3-4 PERSON MM	110	50	129	52	31		40	23	11	476
5 PERSON MM	24	4	20	24	20		12	12	1	124
6+ PERSON MM	50	21	41	74	47		103	40	22	478
COLUMN TOTAL	940	172	524	225	204		179	94	40	2602

ADEQUATE CONDITIONS										
WLOEST PERSON LESS THAN 62										
1 PERSON MM	7	7	390	1334	613		304	54	22	2774
2 PERSON MM	7	7	271	1730	1723		2297	752	222	7002
3-4 PERSON MM	14	37	337	3454	3757		4723	1256	500	14145
5 PERSON MM	7	7	102	1135	1234		1732	460	252	4933
6+ PERSON MM	5	9	29	503	340		1071	430	270	3357
COLUMN TOTAL	37	60	1129	6262	4272		10127	2456	1366	32211

ADEQUATE CONDITIONS										
WLOEST PERSON 62 OR GREATER										
1 PERSON MM	14	0	37	71	23		7	0	0	149
2 PERSON MM	20	0	67	132	274		147	59	64	742
3-4 PERSON MM	14	0	26	94	141		354	121	103	403
5 PERSON MM	0	0	0	37	32		166	43	45	343
6+ PERSON MM	4	0	7	17	78		174	54	102	440
COLUMN TOTAL	46	0	137	355	546		841	297	313	2537

PAGE COLUMN TOTAL 5541 3061 4417 13623 11409 12767 3474 2710

TOTAL FOR THE PAGE 60567

In short, the HUD data allow the analyst to determine relative levels of over-all housing need among various household types but not to identify individual housing problems nor the households who face those problems. Still, even these rather broad needs assessments can identify some problem areas and suggest support decisions and actions on programs to alleviate housing difficulties. For example, the data may show how many elderly households of various income, race, or tenure categories face relatively severe housing problems. Alternatively, income or family size may prove to be an important indicator of housing deprivation.

Tables 2, 3, 4A-4H, and 5A-5H are intended to aid the analyst in making these and other comparisons of housing need among various county household types and between the county and the State as a whole. The analyst can readily complete Tables 2 and 3 for his/her county by using Tables 1A-1H for that county. Tables 4A-4H and 5A-5H, which involve more extensive calculations, have already been constructed for each county and will be sent, along with Tables 1A-1H, to any analyst requesting Level 1 data. As in Tables 1A-1H, the formats shown for all of these other tables are identical for all counties and the State. State-wide data are shown in Tables 1 - 5 to enable the analyst to easily compare housing conditions in his/her county with those in the State at large.¹

Tables 2 and 3 show the percentage distributions of households in Illinois by Race and Tenure and by Housing Conditions and Age of Oldest Member, respectively. In Table 2, the percentages for the categories white owners, white renters, Negro owners, Negro renters, and total owners and total renters are obtained by dividing the appropriate page total in Tables 1A-1H by the number of total renters and total owners combined. (This last total number is simply the sum of the page totals in Tables 1A and 1B.) Data for "all other" owners, renters, and total households are obtained by subtracting the percent of white and Negro owners from total owners, white and Negro renters from total renters, and percents of total whites and Negroes from total households. The total for each race is obtained by summing the entries in each column. Data for Spanish-American households are calculated in the same manner; these data are presented separately because this group constitutes an independent category the members of which may also list themselves as white, Negro, or other non-white.

Table 3 can be completed by first summing owner and renter figures in Tables 1A and 1B for each condition/age category, and then dividing each of these subtotals by the number of total owners and renters combined. Total percents in Table 3 are obtained by adding the entries in each row and column.

Together, Tables 2 and 3 can highlight important differences between a county's housing patterns and those statewide and indicate the existence of particularly severe housing problems. Tables 4A-4H and 5A-5H provide more detailed information.

¹As of June 1976 the Level 1 1970 base data is also available for selected municipalities, and displayed in the same format as shown in this chapter. They are available from either DLGA or Housing Research and Development.

TABLE 2 PERCENT DISTRIBUTION OF HOUSEHOLDS IN ILLINOIS BY RACE AND TENURE (Percents)

Tenure	Race			
	White	Negro	All Other	Total
Owner	56.0	3.3	.1	59.4
Renter	32.1	8.0	.5	40.6
Total	88.1	11.3	.6	100.0

Spanish-American	
	.7
	1.7
	2.4

Source: Tables 1A-1H, p.16a-h, this report.

TABLE 3 PERCENT DISTRIBUTION OF HOUSEHOLDS IN ILLINOIS BY HOUSING CONDITIONS AND AGE OF OLDEST PERSON (Percents)

Age	Condition of Housing	
	Inadequate Condition	Adequate Condition
Less than 62	14.8	57.4
62 or older	8.3	19.5
Total	23.1	76.9

Total	
	72.2
	27.8
	100.0

Source: Tables 1A and 1B, pp. 16a, 16b, this report.

Tables 4A-4H show the percentage that households in a particular housing condition/age or income category constitute of all households in that table. For example, Table 4A shows that 4.9% of all owner-occupied units in Illinois are inadequate and occupied by a household whose oldest member is 62 years of age or more. The percentages displayed in Table 4A, like those in Tables 4B-4H, can be added. For instance, 11.1% (6.2% are owner households less than 62 years plus 4.9% are owner households 62 or older) of all Illinois owner-occupied housing is inadequate. By examining an individual county's computer printout and by comparing those data with the State tables, the analyst can determine which household groups suffer severe housing problems relative to other households both in that county and across Illinois.

Tables 5A-5H offer an even more detailed comparative tool. As in the other printouts, the data in these tables are divided into four "blocks":

- Inadequate conditions, oldest person less than 62
- Inadequate conditions, oldest person 62 or older
- Adequate conditions, oldest person less than 62
- Adequate conditions, oldest person 62 or older

Because the percentages in each "block" in Tables 5A-5H add to 100%, the analyst can readily examine the relative proportions of household size and income types within each block. For example, Table 4F shows that 44.9% of all Negro renter households live in inadequate units and have oldest members less than 62. Table 5F shows that the majority of the 44.9% earn less than \$5000 annually. Table 4F also shows that just over 12% of all Negro renter households live in inadequate units and have oldest members 62 years of age or older. Table 5F shows that 50.2% of these elderly Negro households have annual incomes of less than \$2000 and that 50% of them are one-person households.

In summary, Level 1 data provide a good initial picture of the county's housing conditions, both absolutely and relative to the State as a whole. However, as already noted, Level 1 data do not allow the analyst to pinpoint specific housing needs. To identify specific needs and the households who face these needs, the analyst must undertake a Level 2 or Level 3 analysis.

Tables 4A-4H
State of Illinois

Table 4A	Household Percentages, Total Owner-Occupied.
Table 4B	Household Percentages, Total Renter-Occupied.
Table 4C	Household Percentages, White Owner-Occupied.
Table 4D	Household Percentages, White Renter-Occupied.
Table 4E	Household Percentages, Negro Owner-Occupied.
Table 4F	Household Percentages, Negro Renter-Occupied.
Table 4G	Household Percentages, Spanish-American Owner-Occupied.
Table 4H	Household Percentages, Spanish-American Renter-Occupied.

Source: Tables 1A-1H, this Chapter.

INADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

THIS BLOCK IS 6.2% OF THIS PAGE.

INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

THIS BLOCK IS 4.9% OF THIS PAGE.

ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

THIS BLOCK IS 63.2% OF THIS PAGE.

ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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INCOME CATEGORIES

<\$2000	\$2000- \$2999	\$3000- \$4999	\$5000- \$7499	\$7500- \$9999	\$10000- \$14999	\$15000- \$19999	\$20000+
---------	-------------------	-------------------	-------------------	-------------------	---------------------	---------------------	----------

INCOME COLUMN X	7.6	3.9	7.0	10.3	13.7	29.1	15.5	13.2
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* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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INCOME CATEGORIES

	< \$2000	\$2000- \$2999	\$3000- \$4999	\$5000- \$7499	\$7500- \$9999	\$10000- \$14999	\$15000- \$19999	\$20000+
INCOME COLUMN X	13.2	6.3	12.2	18.4	16.3	21.3	7.9	4.8

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* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS

OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS

OLDEST PERSON LESS THAN 62

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ADEQUATE CONDITIONS

OLDEST PERSON 62 OR OLDER

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INCOME CATEGORIES

432000	32000- 32999	33000- 34999	35000- 37499	37500- 39999	310000- 314999	315000- 319999	320000+
INCOME COLUMN X	7.5	3.9	10.1	13.5	29.2	15.6	13.5

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* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

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INADEQUATE CONDITIONS

ADOLESCENT PERSONS OR OLDER

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ADEQUATE CONDITIONS

EQUALLY
 CLOSEST
 PERSON
 LESS
 THAN 62

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ADEQUATE CONDITIONS

PERSONAL DATA

NAME	DATE OF BIRTH	SEX	RACE
JOHN DOE	01-01-1980	M	W
JANE DOE	01-01-1980	F	W
JOHN DOE	01-01-1980	M	W
JANE DOE	01-01-1980	F	W

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11.3X OF THIS PAGE.

INCOME CATEGORIES					
<2000	2000- 2999	3000- 3999	4000- 4999	5000- 5999	6000- 6999
11.9	5.7	11.2	17.7	16.9	22.6
					8.6
					31500-
					31999
					32000+
					5.5

• THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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		INCOME CATEGORIES								
		432400	32000- 32999	33000- 34999	35000- 37499	37500- 39999	310000- 314999	315000- 319999	320000+	
			3.9	7.9	14.2	15.9	27.7	14.3	7.7	
		INCOME COLUMN X		6.7						
		X FOR THE PAGE		100.0						

* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

INADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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INCOME CATEGORIES

	432000	32000- 32999	33000- 34999	35000- 37499	37500- 39999	310000- 314999	315000- 319999	320000+
INCOME COLUMN X	16.5	6.5	16.0	21.3	14.1	15.4	4.6	2.1
X FOR THE PAGE	100.2							

* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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INCOME CATEGORIES

35000- 31000- 31500- 32000-
37499 31499 31999 32000-

12.6

15.7

34.6

10.0

11.1

3.7

1.4

3.4

32000- 31000-
32999 34999

432030

INCOME COLUMN X

X FOR THE PAGE

100.0

• THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

INADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

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INADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

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ADEQUATE CONDITIONS
OLDEST PERSON LESS THAN 62

THIS BLOCK IS 53.2% OF THIS PAGE.

ADEQUATE CONDITIONS
OLDEST PERSON 62 OR OLDER

THIS BLOCK IS 4.2% OF THIS PAGE.

INCOME CATEGORIES

	< \$2000- \$2999	\$3000- \$3999	\$4000- \$4999	\$5000- \$5999	\$6000- \$6999	\$7000- \$7999	\$8000- \$8999	\$9000- \$9999	\$10000- \$14999	\$15000- \$19999	\$20000+
INCOME COLUMN 1	9.3	5.1	13.3	22.9	18.9	21.1	6.5	3.4			

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* THE TABLE IS ACCURATE WITHIN ROUNDING ERRORS.

Tables 5A-5H
State of Illinois

Table 5A	Household "Block" Percentages, Total Owner-Occupied.
Table 5B	Household "Block" Percentages, Total Renter-Occupied.
Table 5C	Household "Block" Percentages, White Owner-Occupied.
Table 5D	Household "Block" Percentages, White Renter-Occupied.
Table 5E	Household "Block" Percentages, Negro Owner-Occupied.
Table 5F	Household "Block" Percentages, Negro Renter-Occupied.
Table 5G	Household "Block" Percentages, Spanish-American Owner-Occupied.
Table 5H	Household "Block" Percentages, Spanish-American Renter-Occupied.

Source: Tables 1A-1H, this Chapter.

INCOME CATEGORIES

	<\$2000	\$2000- \$2999	\$3000- \$4999	\$5000- \$7499	\$7500- \$9999	\$10000- \$14999	\$15000- \$19999	\$20000+	WAM TOTAL
INADEQUATE CIRCUMSTANCES									
WIDEST PERSON LESS THAN 62									
1 PERSON MM	10.4	4.0	7.7	6.7	1.5	0.7	0.1	0.1	31.1
2 PERSON MM	4.2	2.6	5.4	5.0	1.7	1.0	0.2	0.1	19.9
3-4 PERSON MM	5.0	3.5	6.3	7.1	3.0	1.7	0.4	0.2	26.9
5 PERSON MM	1.2	0.9	1.7	1.6	0.7	0.5	0.1	0.1	6.5
6+ PERSON MM	1.7	1.0	3.4	3.6	2.5	2.6	0.8	0.5	15.8
COLUMN TOTAL	22.2	11.8	24.3	23.8	9.5	6.3	1.6	0.6	100.0
INADEQUATE CIRCUMSTANCES									
WIDEST PERSON 62 OR WIDER									
1 PERSON MM	34.4	11.0	9.6	4.1	1.0	0.5	0.1	0.1	64.8
2 PERSON MM	6.1	5.9	7.9	4.7	1.4	0.8	0.2	0.1	26.9
3-4 PERSON MM	1.0	0.8	1.5	1.3	0.5	0.4	0.2	0.1	5.5
5 PERSON MM	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.9
6+ PERSON MM	0.2	0.1	0.3	0.4	0.4	0.5	0.2	0.2	2.1
COLUMN TOTAL	46.2	17.8	19.3	10.5	3.2	2.1	0.7	0.5	100.0
ADEQUATE CIRCUMSTANCES									
WIDEST PERSON LESS THAN 62									
1 PERSON MM	0.3	0.2	1.5	5.4	4.7	3.9	0.9	0.7	17.2
2 PERSON MM	0.2	0.2	1.0	4.3	6.1	11.6	5.1	2.6	30.7
3-4 PERSON MM	0.2	0.2	1.2	5.6	8.6	13.5	4.8	2.8	36.8
5 PERSON MM	0.1	0.1	0.3	1.5	2.2	3.4	1.2	0.8	9.2
6+ PERSON MM	0.1	0.1	0.2	1.0	1.9	2.3	0.9	0.6	6.3
COLUMN TOTAL	0.7	0.6	4.0	17.6	23.1	34.4	12.7	7.2	100.0
ADEQUATE CIRCUMSTANCES									
WIDEST PERSON 62 OR WIDER									
1 PERSON MM	4.6	2.0	4.1	6.5	4.9	3.5	1.1	1.1	27.1
2 PERSON MM	1.2	1.5	4.2	9.0	9.9	12.5	4.7	4.7	47.2
3-4 PERSON MM	0.2	0.2	0.8	2.2	3.6	6.5	3.9	3.1	20.1
5 PERSON MM	0.1	0.1	0.1	0.3	0.5	1.2	0.8	0.6	3.3
6+ PERSON MM	0.1	0.1	0.1	0.2	0.4	0.9	0.6	0.6	2.5
COLUMN TOTAL	5.9	3.6	9.1	18.0	18.8	29.3	10.6	10.0	100.0

INCOME CATEGORIES

	INADEQUATE CONDITIONS	1 PERSON	2 PERSON	3-4 PERSON	5 PERSON	6+ PERSON	COLUMN TOTAL	\$3000-\$3499	\$3500-\$3749	\$3750-\$3999	\$10000-\$11499	\$15000-\$19999	\$20000+	ROW TOTAL
	GLOEST PERSON LESS THAN 62	2.8	1.0	2.1	2.1	1.1	17.9	2.1	1.1	1.1	0.3	0.1	0.1	9.9
	1 PERSON MM	1.3	0.8	2.3	2.3	1.4	8.9	2.3	4.0	4.0	3.9	0.9	0.4	17.6
	2 PERSON MM	0.8	0.6	2.2	2.2	1.9	5.4	2.2	6.2	6.2	7.2	2.0	1.0	25.1
	3-4 PERSON MM	0.2	0.2	0.6	0.6	0.4	1.9	0.6	2.2	2.2	2.4	0.8	0.3	8.3
	5 PERSON MM	0.7	0.3	1.4	1.4	0.9	5.7	1.4	7.5	7.5	15.1	6.6	4.3	39.9
	6+ PERSON MM	5.7	2.7	6.9	6.9	17.9	37.1	6.9	20.7	20.7	28.8	10.2	5.9	100.0
	COLUMN TOTAL													

	INADEQUATE CONDITIONS	1 PERSON	2 PERSON	3-4 PERSON	5 PERSON	6+ PERSON	COLUMN TOTAL	\$3000-\$3499	\$3500-\$3749	\$3750-\$3999	\$10000-\$11499	\$15000-\$19999	\$20000+	ROW TOTAL
	GLOEST PERSON 62 OR FLOER	26.8	5.6	3.8	3.8	11.4	57.4	3.8	1.5	0.6	0.4	0.2	0.1	36.7
	1 PERSON MM	9.4	8.3	11.4	11.4	7.1	48.6	11.4	7.1	4.0	2.5	0.5	0.3	43.3
	2 PERSON MM	1.9	1.0	1.5	1.5	2.4	8.3	1.5	2.1	2.1	2.6	1.2	0.6	12.0
	3-4 PERSON MM	0.1	0.1	0.2	0.2	0.3	0.9	0.2	0.4	0.4	0.4	0.2	0.2	1.5
	5 PERSON MM	0.1	0.1	0.3	0.3	0.4	1.2	0.3	0.6	0.6	1.5	1.1	1.1	4.8
	6+ PERSON MM	37.1	14.9	17.3	17.3	11.4	104.0	17.3	7.9	7.9	7.2	2.9	2.1	100.0
	COLUMN TOTAL													

	ADEQUATE CONDITIONS	1 PERSON	2 PERSON	3-4 PERSON	5 PERSON	6+ PERSON	COLUMN TOTAL	\$3000-\$3499	\$3500-\$3749	\$3750-\$3999	\$10000-\$11499	\$15000-\$19999	\$20000+	ROW TOTAL
	GLOEST PERSON LESS THAN 62	0.9	0.4	0.9	0.9	1.4	5.5	0.9	0.9	0.9	0.8	0.2	0.2	5.3
	1 PERSON MM	0.6	0.3	0.9	0.9	2.3	6.0	0.9	3.5	3.5	7.7	4.1	3.0	22.2
	2 PERSON MM	0.6	0.3	1.0	1.0	3.0	6.9	1.0	6.4	6.4	16.5	8.4	7.4	43.8
	3-4 PERSON MM	0.2	0.1	0.3	0.3	0.9	2.7	0.3	2.2	2.2	6.3	3.5	3.1	16.2
	5 PERSON MM	0.2	0.1	0.2	0.2	0.6	1.3	0.2	1.4	1.4	4.8	3.0	2.9	12.8
	6+ PERSON MM	2.4	1.1	3.1	3.1	7.9	18.6	3.1	14.2	14.2	35.9	19.5	14.3	100.0
	COLUMN TOTAL													

	ADEQUATE CONDITIONS	1 PERSON	2 PERSON	3-4 PERSON	5 PERSON	6+ PERSON	COLUMN TOTAL	\$3000-\$3499	\$3500-\$3749	\$3750-\$3999	\$10000-\$11499	\$15000-\$19999	\$20000+	ROW TOTAL
	GLOEST PERSON 62 OR FLOER	10.6	3.9	4.0	4.0	2.4	24.9	4.0	1.2	1.2	1.0	0.4	0.4	23.5
	1 PERSON MM	4.0	4.7	9.0	9.0	9.1	35.8	9.0	7.3	7.3	8.8	3.3	3.7	49.5
	2 PERSON MM	0.4	0.4	1.1	1.1	1.9	5.8	1.1	2.5	2.5	5.8	4.2	4.1	20.0
	3-4 PERSON MM	0.1	0.1	0.1	0.1	0.2	0.6	0.1	0.4	0.4	1.1	1.0	1.3	3.8
	5 PERSON MM	0.1	0.1	0.1	0.1	0.1	0.5	0.1	0.3	0.3	0.9	0.9	1.3	3.4
	6+ PERSON MM	14.9	8.9	14.1	14.1	13.5	64.5	14.1	11.4	11.4	17.4	9.6	10.5	100.0
	COLUMN TOTAL													

INCOME CATEGORIES

	432000-	33000-	35000-	37500-	310000-	315000-	320000-	MPH
	32499	34999	37499	39999	314999	319999		TOTAL
INADEQUATE CONDITIONS								
WLOEST PERSON LESS THAN 62	10.9	6.7	7.9	2.9	1.0	0.2	0.1	34.0
1 PERSON MM	2.8	6.0	5.6	2.2	1.1	0.3	0.1	22.1
2 PERSON MM	4.0	6.0	5.6	2.2	1.1	0.3	0.1	22.1
3-4 PERSON MM	5.1	6.2	7.3	3.8	2.1	0.5	0.3	26.9
5 PERSON MM	0.6	1.3	1.5	0.6	0.6	0.2	0.1	5.5
6 PERSON MM	0.4	1.0	2.6	2.2	2.6	0.6	0.3	11.2
COLUMN TOTAL	19.9	25.6	24.6	11.2	7.1	1.7	0.9	100.0
INADEQUATE CONDITIONS								
WLOEST PERSON 62 OR ABOVE	39.2	10.8	9.7	1.2	0.4	0.1	0.1	66.2
1 PERSON MM	5.9	7.0	3.9	1.6	0.9	0.3	0.2	26.3
2 PERSON MM	5.0	1.0	0.8	0.5	0.7	0.2	0.2	3.9
3-4 PERSON MM	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.6
5 PERSON MM	0.1	0.2	0.2	0.3	0.3	0.2	0.2	1.3
6 PERSON MM	45.3	19.7	10.6	3.5	2.2	0.7	0.3	100.0
COLUMN TOTAL	14.0	19.7	10.6	3.5	2.2	0.7	0.3	100.0
ADEQUATE CONDITIONS								
WLOEST PERSON LESS THAN 62	0.2	1.5	5.1	4.6	4.2	1.0	0.6	17.6
1 PERSON MM	0.2	1.0	4.1	5.9	12.0	5.6	2.9	31.5
2 PERSON MM	0.2	1.1	5.3	4.6	13.4	4.9	3.0	36.7
3-4 PERSON MM	0.1	0.3	1.3	2.1	3.3	1.2	0.8	6.8
5 PERSON MM	0.1	0.2	0.6	1.2	2.1	0.9	0.6	5.7
6 PERSON MM	0.6	3.9	16.3	22.6	35.0	13.3	7.8	100.0
COLUMN TOTAL	0.4	9.2	16.3	22.6	35.0	13.3	7.8	100.0
ADEQUATE CONDITIONS								
WLOEST PERSON 62 OR ABOVE	4.9	4.3	6.6	4.9	3.7	1.3	1.3	28.9
1 PERSON MM	1.2	4.2	6.7	4.9	13.1	5.2	5.2	48.6
2 PERSON MM	0.2	0.7	1.9	2.9	5.7	3.7	3.2	18.2
3-4 PERSON MM	0.1	0.1	0.2	0.4	1.0	0.6	0.4	2.6
5 PERSON MM	0.1	0.1	0.2	0.3	0.6	0.3	0.3	1.9
6 PERSON MM	6.2	4.2	17.6	16.2	23.9	11.0	10.5	100.0
COLUMN TOTAL	6.2	4.2	17.6	16.2	23.9	11.0	10.5	100.0

ALSO SEE PAGE 10

INCOME CATEGORIES

	<\$2000	\$2000-\$2999	\$3000-\$3499	\$3500-\$3749	\$3750-\$3999	\$10000-\$11499	\$15000-\$19999	\$20000+	ROW TOTAL
INADEQUATE CONDITIONS									
OLDEST PERSON LESS THAN 62									
1 PERSON HH	0.7	1.5	1.2	0.9	0.1	0.0	0.0	0.0	7.3
2 PERSON HH	0.8	1.6	2.7	1.9	1.6	0.4	0.4	0.0	10.3
3-4 PERSON HH	0.9	1.3	3.4	3.0	4.4	1.2	1.2	0.0	15.3
5 PERSON HH	0.2	0.6	1.3	1.0	1.8	0.6	0.6	0.4	6.1
6+ PERSON HH	1.3	4.4	9.3	11.0	20.2	8.7	4.5	4.5	61.3
COLUMN TOTAL	3.7	9.3	17.7	17.6	27.9	10.6	5.1	5.1	100.0
INADEQUATE CONDITIONS									
OLDEST PERSON 62 OR OLDER									
1 PERSON HH	2.7	2.2	0.5	0.4	0.1	0.0	0.0	0.0	25.0
2 PERSON HH	6.7	7.8	5.0	2.9	1.6	0.0	0.0	0.1	35.0
3-4 PERSON HH	1.5	3.2	3.9	2.8	2.9	1.0	0.2	0.2	18.0
5 PERSON HH	0.4	0.4	0.8	0.7	0.9	0.5	0.2	0.2	4.1
6+ PERSON HH	0.4	2.0	2.3	2.2	5.3	3.6	2.0	2.0	18.2
COLUMN TOTAL	11.4	15.4	12.3	8.8	10.6	5.0	2.5	2.5	100.0
ADEQUATE CONDITIONS									
OLDEST PERSON LESS THAN 62									
1 PERSON HH	0.4	1.2	1.7	1.0	0.7	0.1	0.1	0.1	6.6
2 PERSON HH	0.5	1.3	3.3	4.0	5.9	2.4	1.0	1.0	19.1
3-4 PERSON HH	0.6	1.8	4.7	6.2	12.8	7.5	4.2	4.2	38.5
5 PERSON HH	0.2	0.8	1.7	2.4	5.6	3.0	1.8	1.8	15.4
6+ PERSON HH	0.6	5.5	2.4	3.5	7.3	4.2	2.1	2.1	20.7
COLUMN TOTAL	1.8	15.5	13.5	16.8	32.1	17.0	9.0	9.0	100.0
ADEQUATE CONDITIONS									
OLDEST PERSON 62 OR OLDER									
1 PERSON HH	1.9	1.7	1.2	0.6	0.4	0.1	0.2	0.2	13.8
2 PERSON HH	4.7	6.8	6.8	5.5	4.4	1.5	0.8	0.8	35.4
3-4 PERSON HH	1.6	3.5	4.9	5.2	8.8	4.7	2.4	2.4	32.3
5 PERSON HH	0.3	0.5	0.9	1.4	2.9	1.5	0.9	0.9	7.8
6+ PERSON HH	0.2	0.4	1.3	1.4	2.6	2.5	2.5	2.5	10.9
COLUMN TOTAL	8.5	12.6	14.9	14.0	16.4	10.1	6.5	6.5	100.0

NEGRO RENTER OCCUPIED

INCOME CATEGORIES									
		\$2000- \$2999	\$3000- \$4999	\$5000- \$7499	\$7500- \$9999	\$10000- \$14999	\$15000- \$19999	\$20000+	ROW TOTAL
INADEQUATE CONDITIONS									
	OLDEST PERSON LESS THAN 62								
	1 PERSON HH	3.1	5.7	4.3	0.6	0.2	0.1	0.1	23.9
	2 PERSON HH	2.2	4.2	3.7	0.6	0.4	0.1	0.1	15.3
	3-4 PERSON HH	4.9	6.3	6.5	1.4	0.9	0.2	0.1	26.8
	5 PERSON HH	1.6	2.7	2.0	0.4	0.3	0.1	0.1	8.8
	6+ PERSON HH	2.1	6.8	5.7	3.2	2.9	0.9	0.4	25.4
	COLUMN TOTAL	13.7	25.5	21.9	6.0	4.6	1.2	0.5	100.0
INADEQUATE CONDITIONS									
	OLDEST PERSON 62 OR OLDER								
	1 PERSON HH	7.1	4.2	1.3	0.2	0.1	0.1	0.1	50.0
	2 PERSON HH	7.4	8.6	4.3	0.5	0.2	0.0	0.0	29.9
	3-4 PERSON HH	2.0	3.5	3.2	0.6	0.4	0.2	0.1	12.8
	5 PERSON HH	0.3	0.7	0.6	0.2	0.2	0.1	0.1	2.3
	6+ PERSON HH	0.4	1.0	1.3	0.7	1.0	0.4	0.4	5.5
	COLUMN TOTAL	17.0	17.8	10.5	2.1	1.6	0.7	0.5	100.0
ADEQUATE CONDITIONS									
	OLDEST PERSON LESS THAN 62								
	1 PERSON HH	0.1	1.5	6.7	4.2	2.2	0.3	0.2	15.2
	2 PERSON HH	0.1	1.1	5.6	7.3	9.3	2.6	0.9	26.7
	3-4 PERSON HH	0.2	1.6	7.4	9.3	12.5	4.1	1.7	36.8
	5 PERSON HH	0.1	0.6	2.5	2.8	3.9	1.3	0.6	11.5
	6+ PERSON HH	0.1	0.4	2.1	2.6	3.3	1.2	0.7	10.1
	COLUMN TOTAL	0.4	5.0	24.1	26.1	31.0	9.4	3.9	100.0
ADEQUATE CONDITIONS									
	OLDEST PERSON 62 OR OLDER								
	1 PERSON HH	1.3	3.1	3.8	2.4	1.5	0.1	0.1	14.2
	2 PERSON HH	0.6	4.2	11.0	9.5	7.7	0.6	0.5	34.7
	3-4 PERSON HH	0.4	1.2	5.0	9.4	12.6	4.6	2.2	35.3
	5 PERSON HH	0.0	0.3	1.1	1.8	2.8	1.8	1.1	8.8
	6+ PERSON HH	0.0	0.1	0.5	1.3	2.6	1.6	1.5	7.5
	COLUMN TOTAL	2.3	8.9	21.1	24.1	26.9	8.9	5.2	100.0

SPANISH AMERICAN OWNER OCCUPIED

INCOME CATEGORIES

	<\$2000	\$2000-\$2999	\$3000-\$3999	\$5000-\$7499	\$7500-\$9999	\$10000-\$14999	\$15000-\$19999	\$20000+	ROW TOTAL
INADEQUATE CONDITIONS									
0 LOWEST PERSON LESS THAN 62									
1 PERSON HH	0.4	0.2	0.2	0.4	0.0	0.0	0.0	0.0	1.1
2 PERSON HH	0.4	0.5	0.7	0.6	0.6	0.9	0.2	0.0	3.5
3-4 PERSON HH	0.4	0.0	0.6	1.6	3.3	2.7	0.4	0.5	9.3
5 PERSON HH	0.3	0.0	0.2	0.3	1.0	1.9	0.9	0.2	4.4
6+ PERSON HH	1.5	0.4	1.9	10.7	18.1	30.8	11.4	7.2	81.8
COLUMN TOTAL	3.0	1.0	3.5	13.4	22.9	36.1	12.8	7.8	100.0

INADEQUATE CONDITIONS									
0 LOWEST PERSON 62 OR OLDER									
1 PERSON HH	3.4	3.6	3.3	0.0	1.0	0.0	0.0	0.0	11.2
2 PERSON HH	1.2	3.6	6.5	5.9	1.0	1.0	0.0	0.0	19.0
3-4 PERSON HH	1.8	1.2	1.5	6.2	3.4	3.8	1.0	1.0	19.6
5 PERSON HH	0.0	0.0	0.9	2.2	0.0	2.8	0.0	0.0	5.7
6+ PERSON HH	0.0	0.9	1.8	1.5	6.8	16.7	7.5	9.9	44.8
COLUMN TOTAL	6.4	9.1	13.8	15.6	12.2	24.1	8.5	10.9	100.0

ADEQUATE CONDITIONS									
0 LOWEST PERSON LESS THAN 62									
1 PERSON HH	0.3	0.1	0.3	0.6	0.5	0.3	0.1	0.0	1.9
2 PERSON HH	0.9	0.3	0.5	1.9	1.9	3.6	1.9	1.1	11.0
3-4 PERSON HH	1.1	0.2	1.0	4.3	7.4	15.7	6.3	5.4	40.9
5 PERSON HH	0.4	0.2	0.5	1.4	4.0	8.8	3.3	3.1	21.4
6+ PERSON HH	0.3	0.1	0.5	2.2	4.2	9.3	4.9	3.9	25.0
COLUMN TOTAL	2.5	0.6	2.6	9.8	17.8	37.5	16.3	13.3	100.0

ADEQUATE CONDITIONS									
0 LOWEST PERSON 62 OR OLDER									
1 PERSON HH	4.9	0.4	0.3	0.5	0.3	0.0	0.3	0.0	6.9
2 PERSON HH	2.4	3.0	5.3	6.6	5.5	4.8	2.4	1.5	31.3
3-4 PERSON HH	0.9	1.0	2.3	4.6	5.3	7.6	7.7	5.9	35.2
5 PERSON HH	0.4	0.0	0.2	2.2	1.4	2.4	2.3	1.8	10.4
6+ PERSON HH	0.0	0.0	0.0	0.7	2.1	3.5	4.4	6.0	16.5
COLUMN TOTAL	8.6	4.7	8.0	14.5	14.4	18.2	17.0	15.0	100.0

SPANISH AMERICAN RENTED OCCUPIED

SPANISH AMERICAN REVIEW ALLOCATIONS									
INCOME CATEGORIES									
	<\$2000	\$2000-\$2999	\$3000-\$4999	\$5000-\$7499	\$7500-\$9999	\$10000-\$14999	\$15000-\$19999	\$20000+	R0-TOTAL
INADEQUATE CUNDITIONS									
BLDEST PERSON LESS THAN 62									
1 PERSON HH	4.6	2.3	4.5	2.7	0.5	0.3	0.1	0.0	14.8
2 PERSON HH	4.5	1.8	4.4	2.9	1.4	0.4	0.1	0.1	15.3
3-4 PERSON HH	6.6	4.8	9.8	7.1	2.6	1.8	0.5	0.3	33.1
5 PERSON HH	1.7	1.1	2.9	2.1	0.7	0.6	0.2	0.2	9.1
6+ PERSON HH	2.4	1.7	5.5	6.9	5.3	4.0	1.7	0.9	28.0
COLUMN TOTAL	19.6	11.5	26.9	21.5	10.3	7.0	2.3	1.3	100.0
INADEQUATE CUNDITIONS									
BLDEST PERSON 62 OR OLDER									
1 PERSON HH	23.2	3.7	3.5	0.4	1.1	0.4	0.0	0.3	32.3
2 PERSON HH	6.7	7.3	7.6	2.6	1.8	0.3	0.0	0.0	26.1
3-4 PERSON HH	4.3	2.3	5.0	2.0	1.7	1.9	0.9	0.5	18.3
5 PERSON HH	1.0	0.4	1.0	1.0	0.8	0.5	0.6	0.0	5.0
6+ PERSON HH	2.0	0.9	3.2	2.9	2.6	4.0	2.4	0.9	18.4
COLUMN TOTAL	36.9	14.3	20.2	8.7	7.9	6.9	3.8	1.6	100.0
ADEQUATE CUNDITIONS									
BLDEST PERSON LESS THAN 62									
1 PERSON HH	0.1	0.1	1.3	4.2	2.0	1.0	0.2	0.2	8.7
2 PERSON HH	0.0	0.1	0.9	5.4	5.4	7.2	2.4	0.7	21.8
3-4 PERSON HH	0.1	0.2	1.1	10.8	11.7	14.7	3.9	1.8	44.0
5 PERSON HH	0.1	0.0	0.4	3.6	3.9	5.4	1.5	0.6	15.4
6+ PERSON HH	0.1	0.1	0.1	1.9	3.0	3.4	1.4	0.9	10.5
COLUMN TOTAL	0.2	0.2	3.6	25.7	25.7	31.5	9.2	4.3	100.0
ADEQUATE CUNDITIONS									
BLDEST PERSON 62 OR OLDER									
1 PERSON HH	0.9	0.0	1.5	2.8	1.0	0.0	0.0	0.0	5.9
2 PERSON HH	0.8	0.0	2.7	5.3	10.9	5.6	2.4	2.5	30.1
3-4 PERSON HH	0.0	0.0	1.1	3.9	5.6	14.0	4.8	4.1	33.3
5 PERSON HH	0.0	0.0	0.0	1.5	1.3	6.6	2.5	1.8	13.6
6+ PERSON HH	0.4	0.0	0.3	0.7	3.1	6.9	2.2	4.1	17.4
COLUMN TOTAL	1.9	0.0	5.5	14.0	21.7	33.2	11.8	12.4	100.0

Level 2: The 1970 Census Published Data and 1st and 4th Count Summary Tapes

The data used in Level 2 are available in the published 1970 Census reports and in the 1st and 4th Count 1970 Census computer summary tapes. Each of these sources is explained below. All of the data are available for each of the 102 Illinois counties. The published census reports can be found at any one of the 18 regional state libraries listed in Appendix C of this handbook. The summary tape data tables can be obtained from either the Illinois Department of Local Government Affairs or the Housing Research & Development Program, University of Illinois at Urbana-Champaign.

Fourth Count data are generally more detailed than the data presented in either the published reports or 1st Count information. In total, the 4th Count Census data consist of 200 tables based on 5, 15, and 20% samples of the population. The portion of the 4th Count data utilized in this handbook is referred to as the Fourth Count Census of Housing - File C. All of the tables used in Level 2 except Tables 151 and 147 are based on a 20% sample of the population.

The 1st Count data consist of 55 tables of 100% or "complete count" information. The portion of the 1st Count data utilized here is termed "First Count 1" (or First Count, File B in the Census Users' Guide). Although less detailed than the 4th Count data, the 100% 1st Count data do not reflect any sampling errors that may be contained in the 4th Count and other less-than-100% population samples. Accordingly, in this analysis 1st Count information is used to verify the reliability of the smaller sample 4th Count data.

Published census reports constitute the third source of Level 2 data. The published tables relevant to this analysis are found in Housing Characteristics for States, Cities, and Counties (Vol. 1, Part 15, U.S. Census of Housing). This book is divided into two parts, HC(1)-A (Chapter A) and HC(1)-B (Chapter B). The second part, HC(1)-B, is utilized in this analysis.

It is important to note that the published census reports and the 1st Count data are not one and the same. The 1st Count is a 100% count and is not contained in the published reports. Chapter A of the published reports presents the 100% sample but not at the county level. Chapter B of the published reports contains tables based on 5% to 20% samples of the population.

The Level 2 analysis is organized into two major parts: general characteristics of the 1970 housing market (Tables 1-3), and measures of housing need (Tables 4-19). The bulk of the analysis describes specific housing needs: each particular need is identified, and then the households which face that housing problem are enumerated. Those analysts who wish to approach the Level 2 analysis from the perspective of particular household types rather than specific housing needs are referred to the list below. This list shows all of the tables in Level 2 which describe a particular household type, and hence it enables the analyst to proceed to document all of the housing problems faced by, for example, low-income households rather than all of the households which, for example, occupy substandard units.

Level 2 is designed to enable the analyst to document the absolute levels of housing need in the county and to compare relative levels of need both within the county and between the county and the State. In many instances, the analyst can simply transfer the data from a Census Table to the appropriate table


Figure 1. Household Characteristics Enumerated
in Level 2 Tables

<u>Household Type</u>	<u>Level 2 Table Number</u>
Owner	All Level 2 Tables except Tables 6 and 12
Renter	All Level 2 Tables except Tables 11 and 17
Negro	All Level 2 Tables except Table 9
Spanish-American	Tables 1, 2, 3, 4, 5, 6, 7, 8, 11, 12, 13, 14, 15, 17, 18
Low-Income	Tables 1, 3, 7, 8, 11, 12, 13
Elderly ¹	Tables 1, 2
Large Families	Table 3

¹The analyst particularly interested in elderly housing is also referred to "Making the Local Market Analysis for Elderly Housing" by Leonard F. Heumann. This paper is available from the author, Housing Research and Development Program, University of Illinois at Urbana-Champaign.

in this section. However, to increase the usefulness of the census data for planning purposes, the analyst may also be asked to compute statistical totals and percentages. Each procedure is carefully described in the accompanying text.

In addition, the tables in the text have been shaded to indicate that a particular calculation is required or to highlight specific housing needs. The following shadings are used in Level 2:

 Data transferred directly from Census table
OR a percentage must be calculated

 Calculation required (excluding percentages)

 Housing need highlighted

As mentioned above, in Level 2 1st Count data should be used to verify the reliability of the smaller sample 4th Count data. Errors in the 4th Count may be caused by two factors. First, statistical errors may arise simply because the 4th Count is a sample and not a complete count of the population. Second, Census respondents may not wish to accurately answer or may not know the answer to certain socio-economic questions (e.g., questions with respect to their income or housing value). Although no available studies can document the degree of this bias, it is generally assumed that the greater the demographic content of the question, the smaller will be the difference between the respondent's answer and the true answer, and the greater the socio-economic content, the greater the difference.

For the purposes of this analysis, the analyst should assume that if the difference between the 1st and 4th Count data is less than 5%, then he/she can be confident that the 4th Count sample accurately reflects the housing characteristics of the entire population. If the difference is 5% or greater, the analyst should be more dubious of the 4th Count sample and rely, to whatever extent possible, upon the First Count, other information, or his/her own informed judgment.

Finally, all Level 2 users should note that Spanish-Americans in the 1st and 4th Count data are defined as those persons who identified Spanish as their "mother tongue", i.e., the language spoken in their home when they were children.

The 1970 county housing market. The data in this sub-section describe the county's housing market as it existed in 1970. The analyst can utilize these data on all of the county's households as "benchmarks" against which to compare the characteristics of households with unmet housing needs. In addition, this information can be compared with the update data described in Chapter III.

Table 1 (pp. 25-26) enumerates households by income, age of head, type of household, and tenure or race. Data for total, owner, renter, and Negro occupied units are taken from Table 110, 4th Count Census of Housing. Spanish-American households are enumerated in Table 155, 4th Count Census of Housing. Table 1 presents the most complete income by age breakdown for households available in the 1st and 4th Count data.

TABLE 1 HOUSEHOLDS BY INCOME, AGE OF HEAD, TYPE OF HOUSEHOLD, AND TENURE OR RACE (Number of Households)

Age, Type of Household Tenure, Race, and Income	Husband/Wife Family			Other Family	Primary Individual
	Under 30 years	30-44	45-64	65+	
TOTAL OCCUPIED					
Under \$ 2000					
\$ 2000-\$ 2999					
\$ 3000-\$ 4999					
\$ 5000-\$ 6999					
\$ 7000-\$ 9999					
\$10000-\$14999					
\$15000-\$24999					
\$25000 +					
OWNER OCCUPIED					
Under \$ 2000					
\$ 2000-\$ 2999					
\$ 3000-\$ 4999					
\$ 5000-\$ 6999					
\$ 7000-\$ 9999					
\$10000-\$14999					
\$15000-\$24999					
\$25000 +					
RENTER OCCUPIED					
Under \$ 2000					
\$ 2000-\$ 2999					
\$ 3000-\$ 4999					
\$ 5000-\$ 6999					
\$ 7000-\$ 9999					
\$10000-\$14999					
\$15000-\$24999					
\$25000 +					

Source: Table 110, 4th Count Census of Housing, for total, renter, and owner data.

TABLE 1 (cont.) HOUSEHOLDS BY INCOME, AGE OF HEAD, TYPE OF HOUSEHOLD, AND TENURE OR RACE
(Number of Households)

Age, Type of Tenure, Race, and Income	Husband/Wife Family				Other Family	Primary Individual
	Under 30 Years	30-44	45-64	65+		
NEGRO OCCUPIED						
Under \$ 2000						
\$ 2000-\$ 2999						
\$ 3000-\$ 4999						
\$ 5000-\$ 6999						
\$ 7000-\$ 9999						
\$10000-\$14999						
\$15000-\$24999						
\$25000 +						
SPANISH-AMERICAN OCCUPIED						
Under \$ 2000						
\$ 2000-\$ 2999						
\$ 3000-\$ 4999						
\$ 5000-\$ 6999						
\$ 7000-\$ 9999						
\$10000-\$14999						
\$15000-\$24999						
\$25000 +						

Source: Table 110, 4th Count Census of Housing, for Negro data.
Table 155, 4th Count Census of Housing, for Spanish-American data.

TABLE 2 HOUSEHOLDS BY TYPE OF HOUSEHOLD, AGE OF HEAD, AND TENURE OR RACE OF HEAD (Number of Occupied Units)

Tenure, Race		Type of Household, Age			Total	Owner	Renter	Negro	Spanish-American
<u>HUSBAND/WIFE FAMILY</u>									
Under 25 years									
25 - 29									
30 - 34									
35 - 44									
45 - 64									
65 or older									
<u>OTHER FAMILY-MALE HEAD</u>									
Less than 65									
65 or older									
<u>OTHER FAMILY-FEMALE HEAD</u>									
Less than 65									
65 or older									
<u>MALE PRIMARY INDIVIDUAL</u>									
Less than 65									
65 or older									
<u>FEMALE PRIMARY INDIVIDUAL</u>									
Less than 65									
65 or older									

Source: Table 38, 4th Count Census of Housing.

TABLE 3 HOUSEHOLDS BY INCOME, SIZE, AND TENURE OR RACE (Number of Households)

Income, Tenure, Race	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 or More Persons	Total
Size of Household							
TOTAL OCCUPIED							
Under \$ 2000							
\$ 2000-\$ 2999							
\$ 3000-\$ 4999							
\$ 5000-\$ 6999							
\$ 7000-\$ 9999							
\$10000-\$14999							
\$15000-\$24999							
\$25000 +							
Total							
OWNER OCCUPIED							
Under \$ 2000							
\$ 2000-\$ 2999							
\$ 3000-\$ 4999							
\$ 5000-\$ 6999							
\$ 7000-\$ 9999							
\$10000-\$14999							
\$15000-\$24999							
\$25000 +							
Total							
RENTER OCCUPIED							
Under \$ 2000							
\$ 2000-\$ 2999							
\$ 3000-\$ 4999							
\$ 5000-\$ 6999							
\$ 7000-\$ 9999							
\$10000-\$14999							
\$15000-\$24999							
\$25000 +							
Total							

Source: Table 117, 4th Count Census of Housing, for total, owner, and renter data.

TABLE 3 (cont.) HOUSEHOLDS BY INCOME, SIZE, AND TENURE OR RACE (Number of Households)

Size of House- hold Income, Race, Tenure	1 Person	2 Persons	3 Persons	4 Persons	5 Persons	6 or More Persons	Total
NEGRO OCCUPIED							
Under \$ 2000							
\$ 2000-\$ 2999							
\$ 3000-\$ 4999							
\$ 5000-\$ 6999							
\$ 7000-\$ 9999							
\$10000-\$14999							
\$15000-\$24999							
\$25000 +							
Total							
SPANISH-AMERICAN							
OCCUPIED							
Under \$ 2000							
\$ 2000-\$ 2999							
\$ 3000-\$ 4999							
\$ 5000-\$ 6999							
\$ 7000-\$ 9999							
\$10000-\$14999							
\$15000-\$24999							
\$25000 +							
Total							

Source: Table 117, 4th Count Census of Housing, for Negro data.
Table 160, 4th Count Census of Housing, for Spanish-American data.

Table 2 (p. 27) describes households by type of household, age of head, and race or tenure. These data are found in Table 38, 4th Count Census of Housing. Table 2 provides a more detailed picture of the types of households and the age distribution of heads of households within each county. However, no income data are included in this crosstabulation.

Household size data as well as information on income, tenure, and race are available in Table 3 (pp. 28-29). Table 117, 4th Count Census of Housing, provides these data for total, owner, renter, and Negro households. Spanish-American data are enumerated in Table 160, 4th Count Census of Housing. The "total" rows in Table 3 can be completed by summing the number of households in each household size category (i.e., by summing down the columns) by tenure and race. The last column in the table can be completed by summing across each row.

When all of the data have been entered, Table 3 will show the analyst the total number of occupied households in the county as well as the total number of owners, renters, and Negro and Spanish-American households. In addition, for each of these race or tenure groups, the final column and row in Table 3 display the distribution of income and household sizes, respectively. Finally, the analyst can determine the number of households in each income/household size/tenure or race category that reside in the county.

Table 3 does not crosstabulate tenure by race. These data, along with household size information, are available in Table 37, 4th Count Census of Housing. Although not inserted in this handbook, Table 37 will be included in the Level 2 data package.¹

Measures of housing need. First and Fourth Count Census data allow the analyst to identify specific housing needs, e.g., excessive housing costs or overcrowding, and, in one instance, to determine the number of households that suffer more than one type of housing need. In addition, the analyst has some flexibility in setting standards of overcrowding and high housing costs. However, these advantages over Level 1 exact a price: 1st and 4th Count data do not crosstabulate housing needs by as many housing unit and household variables as does the HUD data.

STRUCTURALLY SUBSTANDARD UNITS. Structurally substandard units are defined as those units lacking "some or all plumbing facilities" (see Chapter I, p. 3). Data on units lacking some or all plumbing facilities are available in published census reports as well as in the 4th and 1st Count.

Table 4 (p. 32) enumerates the total number of households and households without complete plumbing facilities by tenure, value, or rent, and the urban/rural location or race. These data are derived from Tables 61, 65, and 82 in Housing Characteristics, a published 1970 census report. Census Table 61 enumerates both the total number of occupied units and the number of occupied units with all plumbing facilities by value for owner-occupied units and by contract rent for renter-occupied units. To obtain the number of occupied units without complete plumbing facilities, the analyst should simply subtract the number of occupied units with all plumbing facilities from the total number of occupied units for each value or rent category. Similarly, to determine the number of units located in urban areas, rural totals are subtracted from overall totals.

¹Also see Tables 11 and 12, pp. 41, 42.

Table 65 and Table 82 report the same type of data for Negroes and Spanish-Americans, respectively. For both of these groups, the analyst should follow the same procedures as those described above to determine the numbers of units without complete plumbing and the number of urban and rural units in each plumbing/tenure category.¹

Table 5 (p. 33) is designed to facilitate the comparison of structural substandardness among different types of households within the county and also statewide. Table 5 is completed by dividing the number of households lacking complete plumbing in each race/value or rent category or in each urban-rural/value or rent category by the total number of households in that category. All of the required data can be found in Table 4, p. 32. For instance, if Table 4 shows that 200 units in the urban portion of the county are valued at less than \$5000, and 50 of these units have inadequate plumbing, then Table 5 will show that 50/200 or 25% of the units in this category are structurally substandard. Comparable percentages for the State of Illinois are already included in Table 5. For example, Table 5 now shows that a relatively large proportion of rural renter households in Illinois, and especially those paying less than \$40 monthly rent, live in structurally substandard units. Once Table 5 is completed, the county analyst will be able to compare plumbing conditions for the county's rural renter households vis-à-vis those statewide as well as to determine if any other household groups in the county face relatively severe structural housing problems.

It should be noted that the rental data in Tables 4 and 5 are based on contract rent whereas most other measures of rent included in Chapter II utilize gross rent. Contract rent simply measures the monthly rental payments made by the household. Gross rent is defined as contract rent plus the average monthly costs of utilities and fuels to the extent that these are paid by the renter in addition to the rent, and hence it is a more comprehensive and consistent measure. Gross rent data with respect to plumbing facilities are available by rent category and race only. These data are presented in Table 6 (p. 34).

Fourth Count Census Table 123 for total and Negro data and Table 166 for Spanish-American data should be used to complete Table 6. The numbers of units lacking complete plumbing by race and rent categories are taken directly from these Census tables. The entries in the "all units" column are computed by summing the number of units with all plumbing and the number lacking complete plumbing for each race and rent category. The percent of units lacking complete plumbing in each category is computed by dividing the number of units without complete plumbing by the total number of units in that category. Comparable percentages for the State are already included in Table 6.

Together, Tables 5 and 6 can highlight differences in measures of housing need that may arise due to alternative variable definitions. For instance, for any given rent category, Table 5 generally shows a lower percentage of units with inadequate plumbing in the State than does Table 6. These findings, attributable principally to the fact that Table 5 measures contract rent while Table 6 measures gross rent, and similar comparisons may prove particularly important to the analyst striving to maintain consistency between base data and update data variable definitions.²

¹The data in Census Tables 61, 65, and 82 do not include one-family units on more than 10 acres or with businesses on the property for owner-occupied units and one-family units on 10 acres or more for renter-occupied units.

²For further discussion, see Chapter III.

TABLE 4

PLUMBING FACILITIES BY TENURE, VALUE OR CONTRACT RENT, AND RACE OR URBAN/RURAL LOCATION
(Number of Units)

Race and Location Value or Rent	ALL UNITS			UNITS LACKING COMPLETE PLUMBING		
	Total	Urban	Rural	Negro	Spanish- American	Negro
<u>OWNER OCCUPIED</u>						
under \$ 5000						
\$ 5000-\$ 9999						
\$10000-\$14999						
\$15000-\$19999						
\$20000-\$24999						
\$25000 or more						
<u>RENTER OCCUPIED</u>						
under\$ 40						
\$ 40-\$ 59						
\$ 60-\$ 79						
\$ 80-\$ 99						
\$100-\$149						
\$150 or more						
No cash rent						

Source: Table 61, Housing Characteristics for States, Cities and Counties, for total and urban/rural data.

Table 65, Housing Characteristics for States, Cities and Counties, for Negro households.

Table 82, Housing Characteristics for States, Cities and Counties, for Spanish-American Households (available only in counties with 400 or more persons of Spanish language).



TABLE 5
PERCENT OF UNITS IN EACH TENURE, VALUE OR RENT, AND RACE OR LOCATION CATEGORY THAT LACK COMPLETE PLUMBING FACILITIES (Percents)

Location and Race Value or Rent	TOTAL		URBAN		RURAL		NEGRO		SPANISH- AMERICAN	
	County	State	County	State	County	State	County	State	County	State
OWNER OCCUPIED										
under \$ 5000		2.0		1.1		6.3		3.6		N
\$ 5000-\$ 9999		28.0		20.2		34.0		34.1		O
\$10000-\$14999		4.9		3.8		6.7		7.4		T
\$15000-\$19999		1.2		1.0		1.8		1.6		
\$20000-\$24999		.6		.5		.9		.7		A
\$25000 or more		.4		.4		.5		.3		V
		.3		.3		.5		.4		A
RENTER OCCUPIED										
under \$ 40		5.2		4.8		11.5		5.8		I
\$ 40-\$ 59		31.3		27.2		41.7		38.6		L
\$ 60-\$ 79		16.8		18.1		8.8		20.3		A
\$ 80-\$ 99		8.7		9.2		3.1		11.6		B
\$100-\$149		4.1		4.2		2.0		5.5		L
\$150 or more		1.3		1.3		1.6		1.4		E
No cash rent		.6		.5		2.4		1.0		
		9.1		6.1		17.5		15.2		

Source: Table 4, page 32, this report.

TABLE 6 PLUMBING FACILITIES BY GROSS RENT AND RACE OF HEAD (Number of Occupied Units; Percents)

Plumbing Facilities		All Units	Units Lacking One or More Plumbing Facilities	Percent of Units Lacking Complete Plumbing	
Gross Rent				County	State
TOTAL RENTERS					5.2
Less than \$40					36.1
\$ 40-\$ 59					32.8
\$ 60-\$ 79					15.8
\$ 80-\$ 99					5.5
\$100-\$149					1.6
\$150-\$199					.7
\$200 or more					.6
No cash rent					9.1
NEGRO RENTERS					5.8
Less than \$40					39.9
\$ 40-\$ 59					29.6
\$ 60-\$ 79					18.2
\$ 80-\$ 99					7.8
\$100-\$149					1.9
\$150-\$199					1.0
\$200 or more					1.0
No cash rent					15.2
SPANISH-AMERICAN RENTERS					5.1
Less than \$40					34.4
\$ 40-\$ 59					37.3
\$ 60-\$ 79					14.7
\$ 80-\$ 99					5.6
\$100-\$149					2.0
\$150-\$199					1.7
\$200 or more					.4
No cash rent					11.1

Source: Table 123, 4th Count Census of Housing, for total and Negro data.
Table 166, 4th Count Census of Housing, for Spanish-American data.

Fourth Count data include one additional important crosstabulation with respect to structural inadequacy. Table 142, 4th Count Census of Housing, enumerates the total number of occupied units, owned and rented units, and Negro-occupied units that lack complete plumbing facilities by household income. Table 180 enumerates Spanish-American households. These data should be used to complete Table 7 (p. 36). "All units" rows should be computed by adding the number of units with all plumbing and the number lacking some plumbing for each income/tenure or race category. The last column in Table 7 can be completed by adding all of the other entries across each row.

Table 8 (p. 37) shows the percent of occupied units in each income and tenure or race category that lack one or more plumbing facilities. To complete Table 8, the county analyst should divide the number of units in each income/tenure or race category lacking complete plumbing by the total number of units in that category. All of the necessary information is given in Table 7, p. 36. Comparable percentages for the State of Illinois have been computed by the designers of the handbook, and already are included in Table 8.

First Count data to verify the accuracy of the 4th Count estimates are available and displayed in Tables 9 and 10 of this chapter.

The data in Table 9 (p. 38) are derived from Tables 35a, 43a, 36a, and 44a of the 1st Count. Tables 35a and 43a show the total number of units and the number of units with complete plumbing, respectively, by value for owner-occupied units. Tables 36a and 44a display comparable data for renter-occupied units. In both cases, the number of units lacking complete plumbing is obtained by subtracting the number of units with all plumbing from the total in each income category.

First Count data for Negro occupied units with all plumbing facilities are not available by value/rent categories. As displayed in Table 10 (p. 39), Census Tables 35b and 43b provide data for all Negro owner-occupied units and Negro owner-occupied units with complete plumbing facilities, respectively. Tables 36b and 44b provide comparable data for renters. The numbers of units without complete plumbing facilities are obtained by subtraction.

No 1st Count information with respect to plumbing facilities is available for Spanish-American households.

EXCESSIVE HOUSING COSTS. As explained in Chapter I (see p. 3), this model uses the following standards to determine whether or not a household is paying more than it can afford for housing:

Housing costs are excessive if a household's annual income is less than \$20,000 and

- a) renter households pay more than 25% of their income in gross rental costs
- OR b) owner households occupy units whose value exceeds 2.5 times current income.

Data with respect to these standards is available in the 4th Count Census of Housing.

TABLE 7 PLUMBING FACILITIES BY INCOME AND TENURE OR RACE OF HEAD (Number of Occupied Units)

Type of Unit	Income	under \$2000	\$2000- 2999	\$3000- 4999	\$5000- 6999	\$7000- 9999	\$10000- 14999	\$15000- 24999	\$25000- or more	Total
<u>TOTAL OCCUPIED</u>										
All Units										
Units Lacking 1+ Plumbing Facilities										
<u>OWNER OCCUPIED</u>										
All Units										
Units Lacking 1+ Plumbing Facilities										
<u>RENTER OCCUPIED</u>										
All Units										
Units Lacking 1+ Plumbing Facilities										
<u>NEGRO OCCUPIED</u>										
All Units										
Units Lacking 1+ Plumbing Facilities										
<u>SPANISH-AMERICAN OCCUPIED</u>										
All Units										
Units Lacking 1+ Plumbing Facilities										

Source: Table 142, 4th Count Census of Housing, for total, renter, owner, and Negro data.
Table 180, 4th Count Census of Housing, for Spanish-American data.

TABLE 8 PERCENT OF ALL UNITS IN EACH INCOME AND RACE OR TENURE CATEGORY THAT LACK ONE OR MORE PLUMBING FACILITIES
(Percents)

Income Type of Unit	under \$2000		\$2000- 2999		\$3000- 4999		\$5000- 6999		\$7000- 9999		\$10000- 14999		\$15000- 24999		\$25000 or more		Total	
	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.
TOTAL OCCUPIED		12.3		8.6		6.5		4.6		2.6		1.2		.7		.6		3.7
OWNER OCCUPIED		11.0		7.1		5.3		3.9		2.0		.8		.6		.5		2.5
RENTER OCCUPIED		13.3		9.9		7.5		5.3		3.2		1.8		1.2		1.3		5.4
NEGRO OCCUPIED		11.6		7.7		6.2		4.5		3.1		1.7		1.0		1.5		5.0
SPANISH-AMERICAN OCCUPIED		10.5		9.0		8.0		4.8		3.0		1.9		2.0		.3		4.2

Source: Table 7, p. 36, this report, for County Data.
Tables 142 and 180, 4th Count Census of Housing, for State of Illinois data.

TABLE 9 PLUMBING FACILITIES BY TENURE AND VALUE OR RENT (Number of Units)

Type of Unit	Value	under \$5000	\$5000-9999	\$10000-14999	\$15000-19999	\$20000-24999	\$25000-34999	\$35000-49999	\$50000 and up
TOTAL OWNER OCCUPIED									
With all plumbing									
Lacking complete plumbing									

Type of Unit	Rent	under \$40	\$40-59	\$60-79	\$80-99	\$100-119	\$120-149	\$150-199	\$200-299	\$300 or more	No cash Rent
TOTAL RENTER OCCUPIED											
With all plumbing											
Lacking complete plumbing											

Source: Tables 35a and 43a, 1st Count Census of Housing, for owner-occupied units.
 Tables 36a and 44a, 1st Count Census of Housing, for renter-occupied units.

TABLE 10 PLUMBING FACILITIES BY TENURE AND RACE OF HEAD (Number of Units)

Plumbing Facilities Type of Unit	Total	With All Plumbing	Lacking Complete Plumbing
<u>OWNER OCCUPIED</u>			
Total			
Negro			
<u>RENTER OCCUPIED</u>			
Total			
Negro			

Source: Tables 35b and 43b, 1st Count Census of Housing, for owner-occupied units.
 Tables 36b and 44b, 1st Count Census of Housing, for renter-occupied units.

Table 11 (p. 41) enumerates the number of owner-occupied units by household income, housing value, and race of household head. All of these data can be found in Table 118 (total and Negro owner-occupied) and Table 161 (Spanish-American owner-occupied), 4th Count Census of Housing.

The shaded areas in Table 11 indicate those households who occupy units the value of which exceeds 2.5 times household income. In some instances, the table's aggregation of value and income data into a relatively small number of categories does not permit the analyst to state that all of the households in a particular income-value category do or do not face excessive housing costs. In these cases, data cells in Table 11 for certain income-value categories are not completely shaded, indicating that less than 100% of the households in that income-value category pay excessive housing costs. The analyst should calculate the percent of such households according to the following "rules":

Income/Value Category		% Households with Excessive Housing Costs ¹
Income	Value	
Less than \$3000	Less than \$5000	33%
Less than \$3000	\$ 5000- 9999	92
\$ 3000- 4999	\$ 5000- 9999	13
\$ 3000- 4999	\$10000-14999	87
\$5000- 6999	\$10000-14999	13
\$5000- 6999	\$15000-19999	87
\$7000- 9999	\$15000-19999	8
\$7000- 9999	\$20000-24999	67
\$10000-14999	\$25000-34999	40
\$10000-14999	\$35000 and up	99
\$15000-24999	\$35000 and up	92

For example, if 1000 households with incomes in the \$7000-9999 bracket owned units valued between \$20000 and \$25999, the analyst would determine that 67% or 670 households were paying too much for their housing. The other 330 households in that income/value category would be assumed to be living in housing they could reasonably afford.³

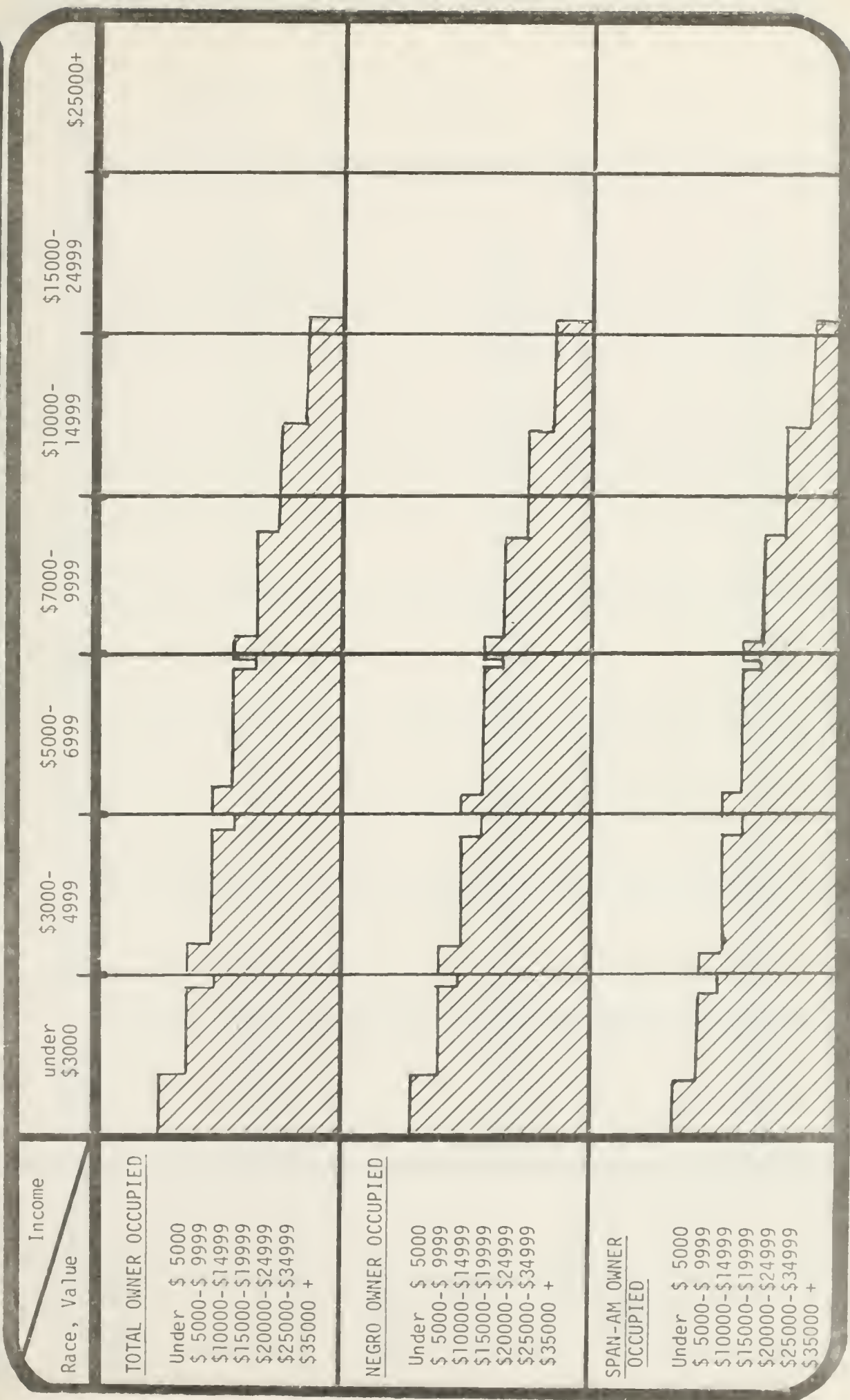
Data on renter-occupied housing units are presented in Table 12 (p. 42). Tables 129 and 172, 4th Count Census of Housing, directly show the percent of household income allocated to rental housing costs by renter households of different income levels and race. These Census tables are the source of Table 12.

¹These percentages are derived from state and national data, Census of Population and Housing, 1970.

²This percentage reflects the fact that households whose annual incomes exceed \$20000 are not included in this model. Sixteen percent of the households in the \$15000-24999-income/\$25000-and-up value category face excessive housing costs, and 55% of these households have incomes below \$20000. The 55% figure is derived from Tables 1A-1H for the State, Level 1 of this report; the analyst who has completed Level 1 and who may wish to check the validity of this figure for an individual county is referred to footnote 1 on page 44.

³The census memoranda indicate that Table 119, 4th Count Census of Housing, which shows the ratio of housing value to household income, is invalid. Hence, Table 119 is not utilized in this handbook.

TABLE 11 HOUSING VALUE BY INCOME AND RACE OF HEAD (Number of Units)



Source: Table 118, 4th Count Census of Housing, for Total and Negro data.

Table 161, 4th Count Census of Housing, for Spanish-American data.

NOTE: Shading is descriptive and should not be taken as a literal proportion of the cells in this table.

TABLE 12 GROSS RENT AS A PERCENTAGE OF INCOME, BY INCOME AND RACE OF HEAD (Number of Units)

Income Race and Rent/ Income Ratio	under \$2000	\$2000- 2999	\$3000- 4999	\$5000- 6999	\$7000- 9999	\$10000- 14999	\$15000- 24999	\$25000 +
<u>TOTAL RENTER OCCUPIED</u>								
Less than 10%								
10 - 14%								
15 - 19%								
20 - 24%								
25 - 34%								
35% or more								
Not Computed								
<u>NEGRO RENTER OCCUPIED</u>								
Less than 10%								
10 - 14%								
15 - 19%								
20 - 24%								
25 - 34%								
35% or more								
Not Computed								
<u>SPAN-AM RENTER OCCUPIED</u>								
Less than 10%								
10 - 14%								
15 - 19%								
20 - 24%								
25 - 34%								
35% or more								
Not Computed								

Source: Table 129, 4th Count Census of Housing, for Total and Negro data.

Table 172, 4th Count Census of Housing, for Spanish-American data.

TABLE 13 PERCENT OF HOUSEHOLDS IN EACH TENURE, RACE, AND INCOME CATEGORY THAT FACE EXCESSIVE HOUSING COSTS*
(Percents)

Tenure and Race	under \$2000		\$2000-2999		\$3000-4999		\$5000-6999		\$7000-9999		\$10000-14999		\$15000-19999	
	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.
OWNER OCCUPIED														
Total	87.3		87.3		66.3		48.0		29.4		16.8		3.5	
Negro	83.2		83.2		61.7		47.9		22.7		6.2		.6	
Spanish-American	84.0		84.0		76.8		75.5		53.5		15.3		1.6	
RENTER OCCUPIED														
Total	99.1		94.2		77.5		45.3		16.6		3.8		1.3	
Negro	99.6		97.3		82.8		49.6		12.2		.8		--	
Spanish-American	99.6		97.0		79.6		31.4		8.6		1.3		.4	

Source: Tables 11 and 12 pp.41,42, this report, for County Data.

Tables 118, 161, and 172, 4th Count Census of Housing, for State of Illinois Data.

*Excessive Housing Costs defined on p. 3 of this report.

The shaded areas highlight those households paying more than 25% of their income for rental housing. Because households whose annual incomes exceed \$20000 are not included in this model, the analyst should assume that 62% of the households in each rent category in the \$15000-24999 income class have incomes that fall below \$20000.¹

Tables 11 and 12 also enable the analyst to select more rigorous standards of excessive housing costs than the ones generally utilized in this model if he/she believes that local factors warrant such a redefinition. Further, the analyst can calculate the percentage of households in each race/income category which face excessive housing costs. These data can be displayed in Table 13 (p. 43), which includes comparable percentages for the State of Illinois. To complete Table 13 for total owners, the analyst should divide the number of owner households in the shaded areas of Table 11, in each income category, by the total number of owner households in that category.² For total renters, the analyst should divide the number of renter households that face excessive housing costs (i.e., the number of households in the shaded areas of Table 12) in each income category by the total number of renter households minus the number of renter households for which rent/income ratios are not computed in that income category. Similar calculations should be made for Negro and Spanish-American owners and renters. All of the requisite data can be found in Tables 11 and 12, pp. 41-42.

There are no relevant 1st Count data on excessive housing costs.

OVERCROWDING. In this model, a household is considered to be overcrowded if there is more than one person per room in the housing unit occupied (see Chapter I, p. 4). Severe overcrowding is defined as 1.51 or more persons per room. Data with respect to both of these standards are enumerated in the 1st and 4th Count Census of Housing.

¹This percentage is derived from Tables 1A-1H for the State, Level 1, this Chapter. Alternatively, the analyst who has completed a Level 1 analysis can utilize Tables 1A-1H for his/her individual county to determine, by race, the proportion of the county's renter (or owner) households in the \$15000-24999 income class whose incomes fall below \$20,000, and then can apply these proportions to all rent categories in the \$15000-24999 income class, Table 12.

For example, using the "page column total" data in Table 1B for the county, the analyst can calculate the proportion that renter households with incomes of \$15000-1999 constitute of all renter households whose incomes exceed \$15000. This proportion is then assumed to apply to each rent category in the \$15000 "and up" income class (the sum of the last two columns) in Table 12. For each of these categories, the proportion is multiplied by the number of households in that category to determine the number of households earning \$15000-19999. The analyst can then determine the proportion that these households constitute of all households in the \$15000-24999 category. Similar calculations may be made for Negro and Spanish-American renters utilizing Tables 1F and 1H in this Chapter, Level 1, respectively, and for owners utilizing Tables 1A, 1E, and 1G, Level 1.

²Because Table 11 contains only information on owners below \$3000 income, the "less than \$2000" and "\$2000-2999" columns in Table 13 assume identical percentages.

Table 14 (p. 46) crosstabulates numbers of households by persons per room, tenure, and race. The shaded areas show those households which are overcrowded. All of these data, with the exception of the last data row, are taken from Table 42, 4th Count Census of Housing. Data in the last row are obtained by summing all entries, column by column. No finer disaggregation of overcrowding is available in the 4th Count.

To get a handle on the severity of overcrowding overall and by household type, the analyst can complete Table 14 (p. 47) by calculating the percentage of households in each race and tenure category which face overcrowding problems. All of the data required to complete Table 15 are found in Table 14 (p. 46). For each degree of overcrowding (i.e., 1.01-1.50, 1.51-2.00, and 2.01+ persons per room), the analyst should divide the number of overcrowded households in each tenure/race category by the total number of households in that category. To calculate the "total percent overcrowded," the analyst should sum the other entries in Table 15, column by column. Table 15 also allows the analyst to compare the degree of overcrowding in the county by tenure and race category with that experienced statewide. Further, the analyst may select more restrictive standards of overcrowding than those used in this handbook, e.g., defining severe overcrowding as 2.01 or more persons per room.

It should be noted, however, that the definition of overcrowding used at this level is not identical to that used in Level 1, nor are the data at the two levels readily comparable. As part of its measure of inadequacy, the HUD tabulation enumerates those units with more than 1.25 persons per room; this is not one of the overcrowding categories used in the 4th (or 1st) Count Census of Housing. In order to compare overcrowding data for the two levels, the analyst who completes a Level 3 analysis will be able to determine directly the number of households with more than 1.25 persons per room.

Table 16 (p. 48) displays comparable but less detailed data on overcrowding available in the 1st Count Census of Housing, Table 30.

(Analysts who do not complete a Level 1 analysis may want to skip the following section.)

OWNER-OCCUPIED UNITS: AGE OF UNIT/VALUE OF UNIT. The definition of inadequate conditions used in the HUD tabulation presented in Level 1 includes those owner-occupied units built in 1939 or earlier and valued below \$10000 in SMSAs or below \$7500 in non-SMSAs in Illinois. In general, a count of those units which fall below specified age/value cutoffs does not allow the analyst to measure needs directly. Rather, he/she can infer that if a housing unit is old and has a low monetary value, then it is likely to have deteriorated so substantially that it should be replaced.

While the Illinois housing model does not generally utilize this definition of housing inadequacy, analysts who complete a Level 1 analysis may wish to compare those data with housing unit age/value information in the 4th Count Census of Housing. Table 17 (p. 49) enumerates the number of owner-occupied units by the period of construction (pre-1939 or post-1939) value, and race of the head of the household. Data to complete Table 17 for total occupied and Negro occupied units are available in Table 120, 4th Count Census of Housing. Data on Spanish-American units are contained in Table 163, 4th Count Census of Housing. The analyst should calculate the number of units in each age and value class in Table 17 as follows:

TABLE 14 OVERCROWDING BY TENURE AND RACE OF HEAD (Number of Units)

Type of Unit Persons per Room	Total Occupied	Owner Occupied	Renter Occupied	Negro Occupied	Negro Owner	Negro Renter	Span-Am Occupied	Span-Am Owner	Span-Am Renter
0.50 OR LESS									
0.51-0.75									
0.76-1.00									
1.01-1.50				181 or MORE PERSONS PER ROOM ↓					
1.51-2.00				151 or MORE PERSONS PER ROOM ↓					
2.01+									
TOTAL NUMBER OF HOUSEHOLDS									

Source: Table 42, 4th Count Census of Housing

TABLE 15 PERCENT OF HOUSEHOLDS IN EACH TENURE AND RACE OF HEAD CATEGORY THAT ARE OVERCROWDED (Percents)

Tenure & Race Persons Per Room	Total Occupied		Owner Occupied		Renter Occupied		Negro Occupied		Negro Owner		Negro Renter		Span-Am Occupied		Span-Am Owner		Span-Am Renter	
	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.	Co.	St.
1.01-1.50		6.1		5.6		6.9		13.2		11.1		14.1		17.0		17.1		16.9
1.51-2.00		1.2		.7		1.9		3.6		2.3		4.1		5.1		4.5		5.3
2.01 +		.3		.1		.4		.9		.5		1.1		1.4		1.2		1.4
TOTAL % OVERCROWDED		7.6		6.5		9.2		17.7		13.9		19.3		23.4		22.8		23.6

Source: Table 14, p. 46 this report, for County data.
Table 42, 4th Count Census of Housing, for State of Illinois data.

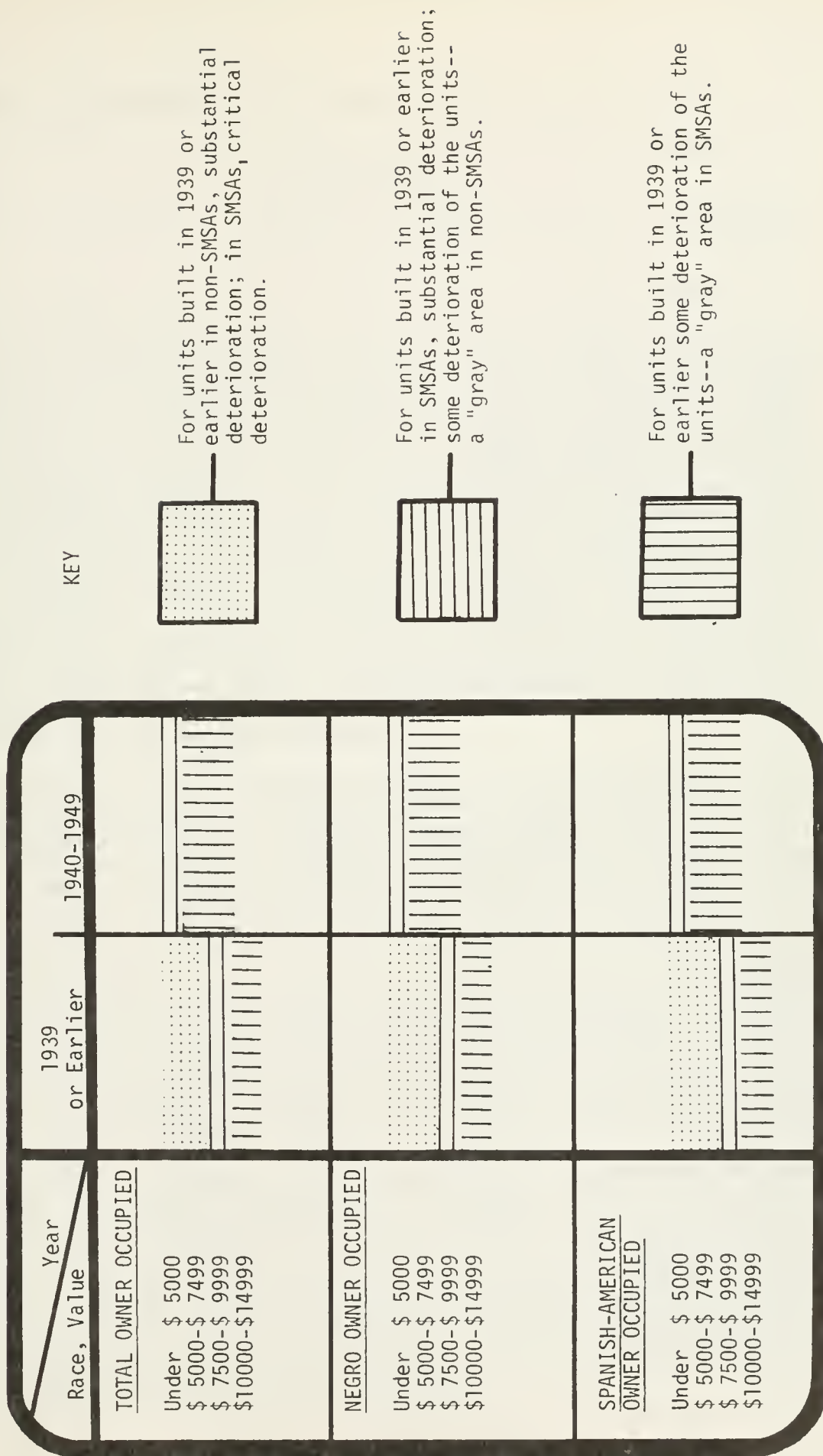
TABLE 16 OVERCROWDING BY TENURE AND RACE (Number of Households)

Tenure & Race Persons per Room					
	Total Occupied	Owner Occupied	Renter Occupied	Negro Occupied	Negro Owner Renter
1.00 or less					
1.01-1.50					
1.51 +					

Source: Table 30, 1st Count Census of Housing.

Note: Table 30 of the 1st Count Census of Housing as available from the Illinois State Library System is in need of correction. See Appendix B.

TABLE 17 OWNER-OCCUPIED UNITS BY YEAR STRUCTURE BUILT, VALUE, AND RACE OF HEAD (Number of Units)



Source: Table 120, 4th Count Census of Housing, for total and Negro data.
 Table 163, 4th Count Census of Housing, for Spanish-American data.

Value less than \$5000:	Take numbers directly from Census Tables
Value \$5000-7499:	Multiply the number of units in the \$5000-9999 value class by .46
Value \$7500-9999:	Multiply the number of units in the \$5000-9999 value class by .54
Value \$10000-14999:	Take numbers directly from Census Tables.

The key to the shading in Table 17 reflects HUD definitions. We have extended the shading for the period 1940-49 so the local analyst can see the number of housing units in the next oldest category that are of low value. One might expect that in the years since 1970 these would become the next most likely housing units to become deteriorated. In 1970, housing constructed between 1940-49, and valued in 1970 below \$5000 in non-SMSAs and \$7500 in SMSAs might also be considered substantially deteriorated. Notice that only the reference to substantial deterioration in the key to Table 17 refers to the HUD definitions; the references to "grey areas" and "critically deteriorated units" are a logical extension of the HUD definitions, again for local planning purposes. (NOTE: In the HUD tabulation, the age/value criterion is the only possible measure of whether or not owner households face excessive housing costs. To the extent that this measure does, in fact, reflect excessive housing costs, an analysis that sums the number of households whose housing value exceeds 2.5 times their income and the number of housing units which fall below the HUD age/value standards will be double, counting the total number of owner households paying too much for their housing.)

The analyst may also wish to compare age/value data with statistics on inadequate plumbing. Census statistics on inadequate plumbing reflect only one type of structural inadequacy. Moreover, Census plumbing statistics indicate only the presence or absence of complete plumbing facilities -- a quantitative measure -- and not whether or not those facilities are rusty, leaky, or whether they work at all. These (and other) qualitative measures of structural adequacy may, however, be reflected in age/value measures of housing need.

MULTIPLE HOUSING NEEDS. While 4th and 1st Count Census data identify specific housing needs, they do not, in general, enumerate the numbers of households that simultaneously suffer more than one type of housing problem. In only one instance are multiple housing needs identified. Table 60, 4th Count Census of Housing, crosstabulates persons per room by plumbing facilities and thus allows the analyst to determine the number of occupied units which are both overcrowded and structurally substandard. These data should be entered in Table 18 (p. 51).

First Count data to verify, in part, the accuracy of the 4th Count 20% sample with respect to multiple housing needs are displayed in Tables 42 and 30, 1st Count Census of Housing, and Table 19 (p. 52) in this section. Census Table 30 enumerates the total number of units with more than 1.01 persons per room (sum of units with 1.01-1.51 and 1.51 or more persons per room) and the number of Negro-occupied units with more than 1.01 persons per room. First Count Census Table 42 provides similar information for units with complete plumbing. For each tenure and race category, the number of units without complete plumbing facilities is obtained by subtracting the number of units with complete plumbing from the total number in that category.

TABLE 18 PLUMBING FACILITIES AND PERSONS PER ROOM BY TENURE AND RACE OF HEAD (Number of Units)

Type of Unit Persons Per Room	Total Occupied		Owner Occupied		Renter Occupied		Total Negro Occupied		Negro Owner Occupied		Negro Renter Occupied		Total Span-Am Occupied		Span-Am Owner Occupied		Span-Am Renter Occupied	
<u>WITH ALL PLUMBING</u>																		
1.01 or less pers./room																		
1.01-1.50 pers./room																		
1.51 or more pers./room																		
<u>LACKING 1+ FACILITIES</u>																		
1.01 or less pers./room																		
1.01-1.50 pers./room																		
1.51 or more pers./room																		

Lacking Plumbing and Overcrowded

Lacking Plumbing and Severely Overcrowded

Source: Table 60, 4th Count Census of Housing.

TABLE 19 PLUMBING FACILITIES AND PERSONS PER ROOM BY TENURE AND RACE (Number of Units)

Type of Unit	Units With More Than 1.01 Persons Per room				
	Total Occupied	Owner Occupied	Renter Occupied	Total Negro Occupied	Negro Owner Occupied Negro Renter Occupied
Total					
With All Plumbing					
Lacking 1+ Facilities					

Source: Tables 30 and 42, 1st Count Census of Housing.

Note: Table 30 of the 1st Count Census of Housing as available from the Illinois State Library System is in need of correction. See Appendix B.

Vacancies. No vacancy data are included in the Level 2 analysis. While up-to-date vacancy data are important indicators of market activity and housing investment decisions, 1970 vacancy statistics are not as reliable an indicator of current housing market conditions as are 1970 housing needs measures. Actual vacancies can vary greatly from one year to the next, whereas housing needs are likely to remain more stable during inflation/recession cycles. Hence, while 1970 housing needs measures have been described in detail in this section, the description and analysis of vacancy data are presented as part of the update in Chapter III.

For those analysts who do wish to examine 1970 vacancy data, the following tables are available in the 4th Count Census of Housing and will be included in the Level 2 data package:

Table 143	Vacancy by plumbing facilities, number of bedrooms, and occupancy status.
Table 145	Vacant for sale only, units by sales (asking) price, and year structure built.
Table 147	Vacant for sale only, by sale price, and number of bedrooms.
Table 151	Vacant for rent, units by asking rent, and number of bedrooms.

Overall, as will be discussed in Chapter III, rental and owner-occupied vacancy rates of 5% and 1%, respectively, are regarded as indicative of a healthy housing market.

In summary. Level 2 data describe the county's housing needs both in absolute terms and relative to the state as a whole. In addition, the data at this level identify the characteristics of those households which face severe housing problems as well as housing units that do not meet generally accepted standards of housing adequacy. Accordingly, a Level 2 analysis can suggest the type and the magnitude of public actions that may be pursued to alleviate housing deprivations.

Currently, federal and state housing assistance programs are designed to aid households in acquiring adequate housing or to build new or upgrade existing housing units. The primary goal of current federal rent subsidy programs is to lift the excessive financial burden shouldered by a substantial number of low-income renter households. In contrast, the principal goal of many housing rehabilitation programs is to increase the stock of standard housing units.

Level 2 data can document the county's 1970 need for local, state, and federal housing assistance programs both to increase the supply of standard housing units and to alleviate individual households' housing problems. For example, Tables 11 and 12 show the total numbers of households which face excessive housing costs as well as the characteristics of these households. Tables 14, 15, and 16 describe the pattern of overcrowding. Both high housing cost and overcrowding data reflect the problems of households occupying the "wrong" housing units. Statistics with respect to inadequate plumbing and age/value criteria, on the other hand, identify problems associated mainly with the housing unit. Tables 4-10 and Table 17 display the total number and type of units which are structurally substandard.

For many counties, statistical problems associated with the Public Use Sample prohibit Level 3 and Level 4 1970 base data analyses. Those counties advised not to undertake a Level 3 or Level 4 analysis are listed on page 7, Chapter I. Analysts in those counties are now directed to Chapter III.

Level 3: The Public Use Sample

The 1st and 4th Count Census tapes and special HUD tabulations provide the only base year data available for most counties with relatively small populations. In more populous counties the Census Public Use Sample is a potentially valuable resource. The Public Use Sample provides information, including all census variables on household and housing conditions, about a small fraction of households (1%). Since the data are available on a household-by-household basis, the analyst is free to choose and construct relevant tabulations or crosstabulations. In this manner a detailed base year matrix of housing conditions and needs can be built.

A package of Level 3 Public Use Sample data is available for 32 counties (listed on p. 7, Chapter I) from the Illinois Department of Local Government Affairs and the Housing Research and Development Program, University of Illinois at Urbana-Champaign (cost: \$100-\$150, plus handling and mailing costs¹). This data package provides all of the information necessary for the 1970 base year analysis described in Chapter I of this handbook.

The Level 3 data consists of two parts. The first is a base matrix which disaggregates the county's households by tenure, race,² type of housing unit, number of rooms, age of household head, number of persons in the household, income, and gross rent or value of property. Thus the base matrix provides a detailed breakdown of the housing market by housing and household characteristics, identifying important sub-groups in the population. For example, an analyst may identify the number of single, elderly white renters living in multi-unit structures in two-room apartments. He/she can then tell how many of these persons fall within certain income and rent categories.

Two sample base matrices, for owners and renters, are presented in Table 1 (p. 56) and Table 2 (p. 57). The sample matrices presented are for Will County and may be considered "typical." However, because of variations in population and housing conditions, matrices for larger, more urban counties or smaller, more agricultural counties may differ. For example, in Will County the highest single family, owner-occupied housing unit value category is \$35000 and up." For renters in multi-family structures the highest gross rent category is "\$200 and up." In Du Page County, which has both a larger population and more expensive housing, the same categories are disaggregated (\$35-49999, \$50000+; \$200-249, \$250+). Similarly, the Will County tables do not break down the mobile home variable by value or number of rooms. Williamson County, however, is typical of many downstate counties where mobile homes represent a significant proportion of the owner-occupied housing stock. Consequently, data for households in mobile homes in Williamson County are disaggregated by number of rooms.

The designers of this handbook have constructed six different matrices, one for each of the county types shown in Map 1 (p. 58). An analyst requesting Level 3 data will receive these data in the format appropriate for his/her individual county.

¹The exact cost to a county will depend upon the size of the county and the number of variables analyzed.

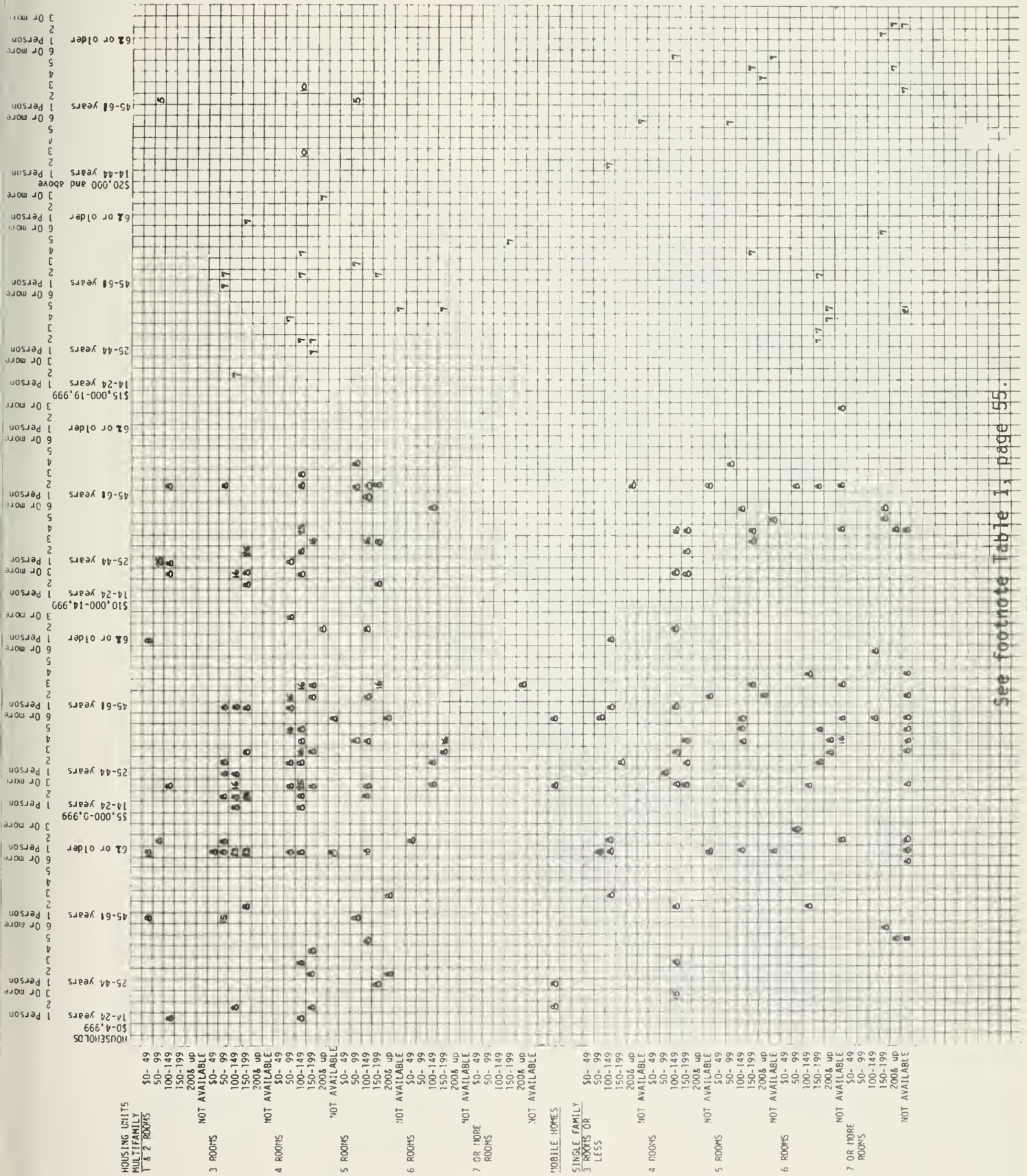
²Because of the small size of the Public Use Sample, the variable "race" is likely to be accurate only in those counties with relatively large numbers of minority households--Cook, Peoria, Madison, and St. Clair counties. Other data on minority households, based on larger samples of the population, is available in Levels 1 and 2.

TABLE 1 Will County Owner-Occupied Housing, 1970

HOUSING UNITS SINGLE FAMILY 3 OR LESS ROOMS 4 ROOMS	HOUSEHOLDS										PERSONS									
	10-14,999	15,000-19,999	20,000-24,999	25,000-34,999	35,000 and up	NOT AVAILABLE	10-14,999	15,000-19,999	20,000-24,999	25,000-34,999	35,000 and up	NOT AVAILABLE	10-14,999	15,000-19,999	20,000-24,999	25,000-34,999	35,000 and up	NOT AVAILABLE	10-14,999	15,000-19,999
5 ROOMS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
6 ROOMS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
7 ROOMS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OR MORE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MULTIFAMILY 3 OR LESS ROOMS 4 ROOMS 5 ROOMS 6 ROOMS 7 OR MORE ROOMS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MOBILE HOMES	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTE: The reader should add a zero to each cell entry to represent the total population (i.e. a 7 is really 70 cases). The method for arriving at the various cell proportions is described in the footnote on page 58.

TABLE 2 Will County Renter-Occupied Housing, 1970



See footnote Table 1, page 55.


COUNTY TYPES FOR ILLINOIS - Map 1

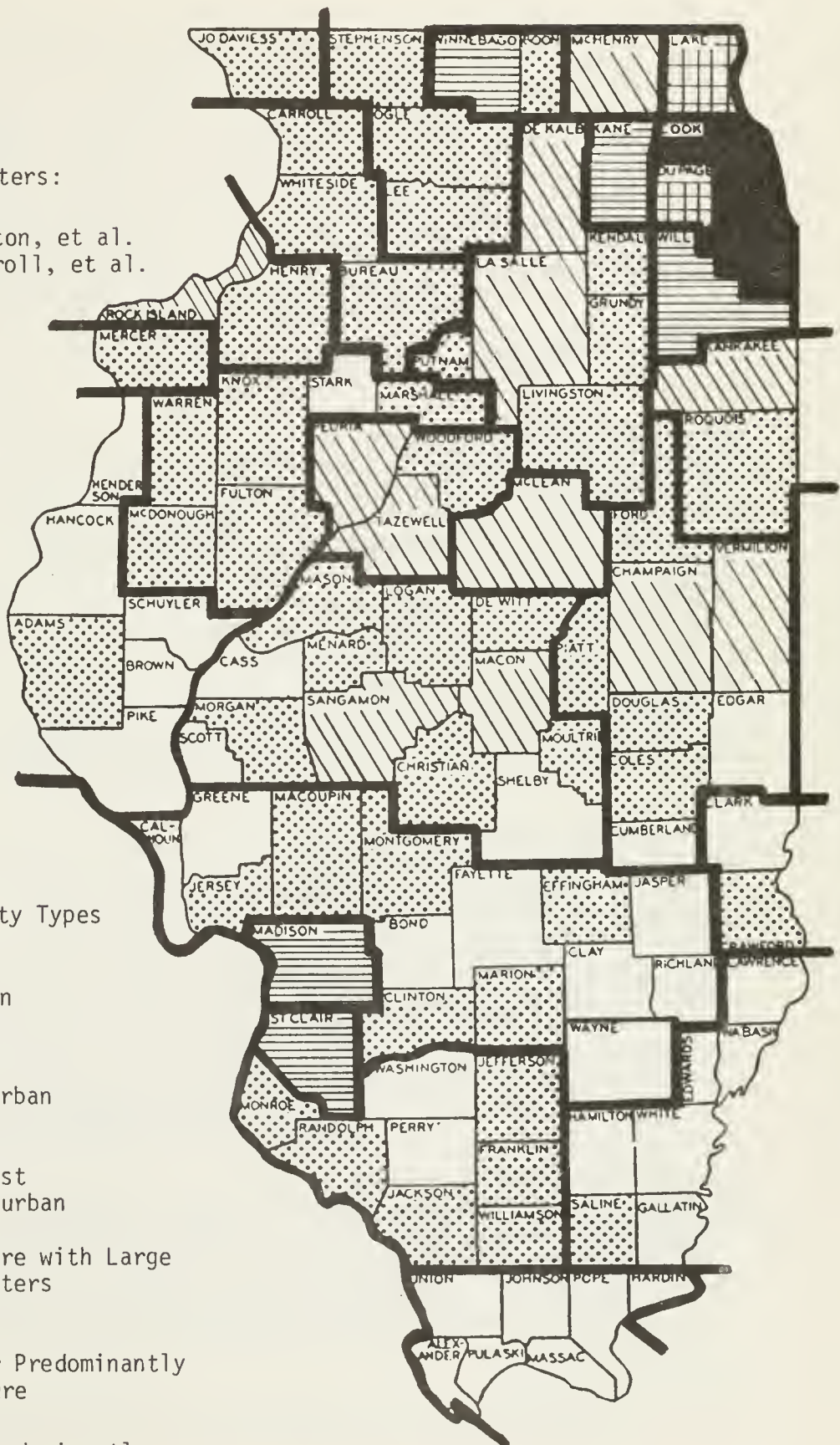
Public Use Clusters and County Types
(Public Use Clusters are indicated by very dark lines.)

NOTE: Noncontiguous Clusters:

- Will and McHenry
- McLean, with Fulton, et al.
- Mercer, with Carroll, et al.

LEGEND for County Types

-  Most Urban
-  Most Suburban
-  Second Most Urban/Suburban
-  Agriculture with Large Urban Centers
-  Wealthier Predominantly Agriculture
-  Poorer Predominantly Agriculture



The second part of the Level 3 data package carries the county's base matrix one step further by identifying households with specific housing needs: crowding at 1.01+, 1.25+, and 1.51+ persons/room; substandard units (lacking some or all plumbing); high value- or rent-income ratios (value 2.5+ times income or rent 25%⁺ of income); and single family units over 30 years old and valued at less than \$10000 in SMSAs or \$7500 in non-SMSAs. For each type of need, households with that housing problem are identified by the same household and housing unit variables as are presented in the base matrix. Also, the Level 3 data reveal the overlap among different types of needs. For example, one table will enumerate overcrowded households, a second table will show those households living in substandard units, and a third table will show those households that are both overcrowded and living in substandard units.

A complete list of the Level 3 variables and housing needs measures, with their definitions, is presented in Table 3 (pp. 60, 61).

Level 3 data offer the analyst several advantages over the HUD tabulations and 1st and 4th Count Census information used in Levels 1 and 2. First, the Level 3 Public Use data allow finer scaling of the housing needs measures included on the HUD tape. For example, "crowding" can be determined at several different levels. Likewise, additional housing unit condition and cost categories can be constructed. Second, the Public Use Sample includes variables missing from the HUD tabulations. For instance, data are available on housing unit type and age of household head. Finally, while the HUD tabulations create total needs figures by combining four factors (housing rent-income ratio, crowding, substandard units, and units over 30 years old and valued at less than \$10000 in SMSAs and \$7500 in non-SMSAs), the Public Use Sample allows the analyst to disaggregate these needs to reveal their relative importance, the degree of overlap between them, and the separate crosstabulations of each needs measure with housing and household variables.

Nonetheless, two features of the Public Use data limit their usefulness for county housing market analyses. First, because of its small sample size, the Public Use data have a greater variability in accuracy than either the HUD sample or the Census 1st and 4th Counts. Accordingly, analysts are advised to check Public Use figures against the HUD and other tabulations, where possible, and to use their own expert knowledge of their county's housing conditions to modify any numbers whose accuracy is highly questionable. In addition, it may be useful for the analyst using Public Use data to think in terms of the relative distribution of the figures rather than the absolute amounts. The analyst should probably not look at individual cells but group cells or rows and columns. The advantage of the Public Use matrix is that it gives the analyst control over the clustering of cells.

A second difficulty with Public Use is areal aggregation of counties with small populations. In Illinois, Public Use data are available separately only for Cook, Du Page, Kane, Lake, Madison, and St. Clair counties. All other counties are aggregated into clusters of more than 250,000 population. As shown on Map 1, in some cases these clusters include more than a dozen counties, and several clusters even extend across state lines. Several of the clusters also cover a wide range of county types.

A differential weighting technique has been developed to estimate any individual county's housing patterns as described by the Public Use Sample

TABLE 3. DESCRIPTION OF HOUSING VARIABLES AND NEEDS MEASURES, PUBLIC USE SAMPLE,
LEVEL 3

HOUSING VARIABLES

Household Size - number of persons occupying a single housing unit including unrelated individuals.

Number of Rooms - rooms used for living purposes, e.g., living rooms, recreation rooms, kitchens, dining rooms, and bedrooms; excludes foyers, halls, unfinished attics, bathrooms, kitchenettes, basements, and other space used for storage.

Tenure - classed as owner-occupied if respondent living in unit reported that it was "owned or being bought," including condominiums and cooperatives. Any occupied housing unit which was not owner-occupied was renter-occupied.

Value - respondent's estimate of how much property would sell for on the current market or asking price of a "vacant, for sale" unit; refers only to owner-occupied or "vacant, for sale" units excluding condominiums, cooperatives and mobile homes.

Gross Monthly Rent - contract rent (monthly dollar rent agreed upon or asked, in the case of vacant units) plus average monthly cost of utilities (water, gas, electricity) and fuels to the extent that these are paid for by the renter.

Race - a. White - all persons who indicated their race as white plus those indicating "other race" who should correctly be classified as white.
b. Negro or Black - all persons who indicated their race as Negro or black plus those indicating "other race" who should correctly be classified as Negro or black.

Spanish Descent - subset of white population; includes all persons reporting Spanish as their mother tongue as well as all persons in families in which the head or wife reports mother tongue as Spanish.

Total Income of Family or Primary Individual - sum of the dollar amounts respondents reported receiving in 1969 as wages or salary income, net non-farm and farm self-employment income, and other income (social security or railroad retirement, public assistance or welfare, and income from other sources such as interest, stock dividends, and private retirement pensions); summed for all respondents in family or reported for primary individual.

Age - age of household head in terms of completed years.

Type of Unit - classified by number of single housing units in structure. Can be single family (one unit detached or one unit attached, e.g., a row house), mobile home, or multi-family (two or more units, e.g., duplexes, quadruplexes, and apartment buildings including condominium buildings).

TABLE 3. DESCRIPTION OF HOUSING VARIABLES AND NEEDS MEASURES, PUBLIC USE
SAMPLE, LEVEL 3 (continued)

HOUSING NEEDS MEASURES

Lacking Some or All Plumbing Facilities - units which lack one or more of the following plumbing facilities: piped hot and/or cold water; flush toilet inside the structure used only by the occupant household; or a bathtub or shower inside the structure used only by the occupant household.

Crowding - having 1.01+, 1.25+, and 1.51+ persons per room in a housing unit (see definitions of Household Size and Number of Rooms).

Gross Rent as a Percentage of Income - yearly gross rent expressed as percentage of total income reported by family or primary individual (in the case of households of unrelated individuals).

Value/Income Ratio - value of owner-occupied unit to the total family income or income of primary individual (in households of unrelated individuals).

Age/Value Criteria - units constructed in 1939 or earlier and valued at less than \$10,000 in SMSAs and \$7500 in non-SMSAs.

data.¹ While this technique offers the most valid estimating procedure currently available, it can produce sizeable statistical errors. Hence, county analysts who use the Public Use data are advised to closely examine and compare these data with other tabulations available for their county, and many small counties have been advised not to use the Public Use data at all (see Chapter I, p. 7).

Because the Public Use Sample can be a useful regional as well as county planning tool, in some instances the probability of estimation errors can be reduced and a regional Level 3 analysis can assist counties which individually could not utilize Public Use data. The regional planner should consult Map 1 to see how closely the Public Use clusters coincide with his/her planning region. If the correspondence is close, then the Public Use Sample well may be useful for regional planning purposes. For example, Peoria, Woodford, and Tazewell counties constitute a planning region as well as a Public Use cluster. Elsewhere, while Effingham, Fayette, and Marion counties are all advised not to undertake a Level 3 analysis on their own, the South Central Illinois Regional Planning and Development Commission can use the Public Use Sample data on these three counties taken together from a Public Use cluster of 14 counties (see Map 1, p. 58) to document its regional housing needs. The primary reason for allowing this three-county cluster to be pulled out of the larger Public Use cluster is the proportion of total Public Use cluster population found in these three counties and the relative homogeneity of the county types in the Public Use cluster.

In sum, the Public Use Sample data provide the most comprehensive picture of housing market conditions and housing needs available in the 1970 Census. Methods of analyzing these data and policy implications are described in Levels 1 and 2. Analysts who complete a Level 3 analysis can utilize these data results in combination with other base level information to better inform housing aid programs and to guide housing information update efforts.

¹Briefly, the tenure, age, income, and household size distributions of the households in each county and of all the households in the Public Use cluster of which the county is a part are derived from the HUD (Level 1) data. These distributions are then utilized to "pull out" the county from its Public Use grouping. See Monitoring Housing Needs in Illinois: An Ongoing Housing Market Analysis Model, Housing Research and Development Program, University of Illinois at Urbana-Champaign.

Level 4: Extensions of the Level 3 Public Use Analysis

In addition to the Level 3 data, other tables based on the Public Use Sample are available from the Illinois Department of Local Government Affairs and the University of Illinois, Housing Research and Development.¹ These include new variables and refinements of variables already presented. The use of these data has the potential of introducing greater complexity to analyses of housing needs and of providing knowledge of additional special household types. However, because further disaggregation of the base and housing needs matrices sharply reduces the sample population, such analyses are recommended for only nine populous counties (Cook, Du Page, Kane, Lake, Madison, Peoria, St. Clair, Will, and Winnebago).

Both by finer scaling and by using multiple definitions of user needs measures, the analyst should be able to develop a far more sensitive description of the housing needs of different household submarkets. For example, in Level 3, crowding was measured at 1.01+, 1.25+, and 1.51+ persons/room. If the analyst desires, crowding can be determined at any other point on a continuous scale (2.01+ persons/room, however, is the generally acknowledged threshold of "extreme" crowding). Alternatively, a new definition such as persons/bedroom could be measured. This could serve either as a substitute or comparative measure. In the case of substandard units, finer scaling can be accomplished by distinguishing the type of plumbing missing (e.g., a flush toilet or hot and cold running water). Again, a new definition could be established based on the existence of central heating or the presence of various home appliances. Similarly, the rent/income and value/income ratios can be re-scaled (e.g., a rent/income ratio of 35+% or 50+%) and the measure of inadequacy using housing unit age and value could be altered (e.g., value in metropolitan areas could be raised from \$10000 to \$15000).

In addition to the refinement or redefinition of housing needs measures, there are several other household types which could be the subject of analysis. For example, an analyst may wish to consider households headed by individuals aged 25-34, in which there are more likely to be very young children or no children at all, apart from households headed by persons aged 35-44, in which the children are more likely to have reached adolescence and, in some cases, will soon be leaving to form households of their own. These and other household types can be separately enumerated by restructuring the "age of head of household" categories. Alternatively, female-headed households can be identified. It is also possible to enumerate households shared with non-relatives.

Several of these measures will be particularly valuable in estimating latent or "hidden" housing demands. For example, if housing were available, many non-relatives living in households might demand their own housing. Similarly, many families would be expected to try to "upgrade" their living conditions by having one bedroom per child or by moving to a newer and more modern home. The University of Illinois research team is currently analyzing and comparing these and other variables and needs measures in order to aid counties in improving their housing market analysis.

¹The Illinois Department of Local Government Affairs or Housing Research and Development will send the Public Use tape to counties or work with them to generate the desired tables.

CHAPTER III: The Update Analysis

The housing needs analysis described in Chapter II of this handbook is a point-in-time analysis designed to use decennial or tri-annual census data.¹ If this point-in-time housing model is the only analytic tool used to assess current housing needs, then the implicit assumption is made that what was true at the time the data were collected (in most cases April 1970) remains relevant for planning decisions being made today. In some counties, this assumption is valid or so nearly so that no analysis using newer data is necessary. In other counties, the assumption may be valid for specific submarkets. In still other counties, the housing market and overall economic conditions may have changed but in such a way that the 1970 census can still be used as a "conservative" estimate of current housing needs. Finally, changes may have been so significant that a careful update must be carried out on some or as many housing market conditions and user groups as can be enumerated.

The first major purpose of this chapter is to show the analyst how to test the relevancy of the 1970 census data (or any other point-in-time housing data) for current planning purposes. Where the 1970 census data no longer accurately describe current housing market conditions, this chapter will show how to undertake an update analysis using primarily locally collected, secondary (existing) data.

There is a second major reason to undertake an update analysis with existing data, in fact, to annually, bianually, or tri-annually repeat the update procedure. By collecting and analyzing data over time rather than for a single point-in-time, the analyst can begin to plot trends in the demand for and supply of housing and to monitor the general "health" of the local housing market. Of particular interest over time is the type and price of new housing relative to low income demand and need. Such trends are also a first step in projecting future housing needs. In effect, regular update analyses begin to describe a second housing model which differs from a point-in-time analysis in that it provides information on the dynamics of the housing market.

Housing Market Analysis vs. Housing Need Analysis

Update analyses deal with the local housing market in general and not specific housing needs as defined in Chapter II. The housing needs analysis described in Chapter II was possible because the base data (the census) were collected from individual households. Accordingly, variables describing both household and housing characteristics could be interrelated with specific housing needs, i.e., overcrowding, excessive housing costs, and substandard housing due to a lack of plumbing. The only way to update such data is to undertake another household survey similar to the census. Clearly, such an undertaking is prohibitive for the majority of smaller planning staffs with little survey training, no computer data handling capacity, and limited time and money for a costly housing survey. Thus, this handbook will stress where to find, how to collect, and how to use secondary data sources to update the 1970 census.²

¹The tri-annual census exists for 60 SMSAs of which Chicago and St. Louis are the only SMSAs with counties in Illinois.

²Proposed future research is aimed at showing local analysts how to collect some key but limited primary data.

Housing market analyses have come to connote the matching of housing demand (created by in-migrant, newly formed, and existing households of varying ages and income levels) with housing supply (consisting of new construction and the standing stock of housing as defined by various size, tenure, and value or rent categories, both vacant and occupied). By updating and interrelating demand and supply, we can infer whether changes in the housing market have increased, decreased, or had little effect on the housing needs found in the base analysis (the 1970 census).

Stated another way, housing needs are standards set for society. We can measure progress in achieving these standards by looking at changes in the number of households which are uncrowded or crowded, paying or not paying excessive housing costs, or living in units with complete plumbing or not. Housing market analyses compare changes in the amount and cost of housing with changes in the number of households and their ability to pay for housing, in order to draw conclusions with respect to housing needs. For example, if the number of households has been increasing while their ability to pay for housing has been decreasing, and the number of housing units has been decreasing while the cost for that housing has been increasing, we can infer that the housing needs that existed in 1970 remain and have very likely increased in number.

The Cost of Updating the 1970 Base Data

Even though the update analysis uses primarily secondary data, it is far more costly in time than the base data analysis. Three factors are involved:

1) Data collection. Most of the update data cannot be mailed to the local analyst already tabulated like the census data in Chapter II. Most update data must be collected by the local analyst from several public and private sources. While research is now underway to identify state, federal and private update data sources that can be collected state-wide and disseminated to local analysts (see Level 2 Update Analysis, p. 120), even when this process is totally operational some data collection will still be necessary at the local level.

2) Data volume. Whereas the census data covered just one year (1970), the update data must cover a minimum of two years--1970 and the update year--to have compatible data with which to measure changes in the housing market. Moreover, since the greatest contribution of update analyses lies in producing a trend line from yearly updates, the analyst should, if at all possible, collect data for each post-census year.

3) Sampling and data compatibility. The data collected from various sources will not always be in the same format. In some cases agencies can turn over printed data that already include summaries and total data. Other agencies may offer computer tapes which the county or regional planning office may or may not be equipped to handle. However, many agencies will have only raw data on file cards that the analyst must convert into a more useful format. Also, in some instances a number of secondary data sources will have to be contacted with respect to a single update variable.

In many counties, contacting all of the suggested secondary data sources or tabulating all the files would be too costly and time-consuming. Here it would pay to draw a random sample. Entire books have been written on accurate (unbiased) sampling techniques. A good reference is: Social Statistics, Blalock, Hubert M., McGraw-Hill, New York, 1972.

We wish we could recommend one categorical sample size and sampling technique, but the data and situations that call for sampling are too varied. As a general rule, the more you can stratify your data before sampling, the smaller your sample can be. For example: say you want to sample a long list of landlords on their vacancies and current rental charges, and that the list includes the number of units each landlord manages and some past rental data on those units. If you first stratify the entire list of landlords into groups by number of units and rental range, then a fairly small random sample from each stratified group can be taken. If only the number of units is available by which to stratify the list of landlords, you might take a slightly larger sample, and so on. The actual sampling could be done by assigning a number to each landlord included in the original list (i.e., 1, 2, 3, ... n) and then using random number tables to pick the actual sample. A simpler method (but less safe statistically) is to pick every third, fifth, tenth, etc., file card or list item, depending on the percent of all of the items that you want to sample.

In some situations, your role as a planning official may require you to observe the entire group under study (e.g., all rental units in the county), but a complete survey need not be undertaken each year. Still, those units or households observed in any year should be representative of the whole universe for housing update purposes. For example, in taking a windshield survey of housing vacancy and condition, the analyst could divide the county into subareas (perhaps census tracts) with relatively homogeneous housing characteristics as determined by housing value, age, percent of units lacking plumbing, etc., according to the 1970 census. Then, subareas with similar housing characteristics should be clustered into as many stratified groups as is necessary to represent the entire spectrum of county housing vacancies and other conditions. Each stratification group should have an equal number of subareas. Then, if the analyst wanted to inspect all the houses every four years, he/she would sample one-quarter of the subareas in each stratified group the first year, a different one-quarter the next, and so on until the final year's quarter was the predetermined remainder. The cycle could be repeated with the now fixed yearly sample until the next census; then the entire process could be repeated.

Data and Analytic Variability

In addition to its higher cost, updating requires far more analytic decisions based on the local analyst's judgment than did the base data analysis. Because of the wide diversity of county types in Illinois, data that is generally available in some counties may not exist in others. Nor is the quality and accuracy of local data uniformly consistent. In short, either the lack of key data or the poor quality of local data may result in a housing market picture that fails to reflect actual local conditions.

Based on our tests of the model presented in this handbook in several Illinois counties, we are confident of the update procedure described here. However, the local analyst MUST rely on his/her knowledge of the local area and his/her common sense in either applying or modifying the results of the statistical update.

Every effort is made to explain how the update data can be interpreted. Tables based on our statewide analysis are presented to enable the analyst to determine, in broad terms, whether the individual county's percentage or rate of change for key indicators is typical, high, or low relative to other counties in Illinois.

Still, it is up to each local analyst to judge the meaning of the combinations of local update data in the context of county goals and priorities.

Format of the Update Analysis

The Level 1 update analysis is divided into six components and a final section interrelating the component findings. The six components are:

- 1) Changes in demand--the number and types of households
- 2) Changes in the cost of housing relative to the cost of living
- 3) Changes in supply--new construction starts
 - private on-site housing
 - mobile homes
 - public housing
 - group quarters
- 4) Changes in supply--the existing stock
 - demolitions
 - conversions
 - mergers
 - appreciation and depreciation
- 5) Changes in vacancies
- 6) Changes in critical submarkets
 - low income
 - elderly

The update analysis is divided into these six components. These components are arranged in a hierarchy of importance. The first two components alone (change in population/households and change in the cost of housing relative to the cost of living) can often provide a good perspective on changes in the housing market, and thus indicate how to interpret and use the findings of the 1970 housing needs analysis.

This hierarchical feature has been used throughout the handbook to encourage use of the handbook and in recognition of the pragmatic realities facing many local analysts. Nevertheless, we do not encourage an update procedure limited to the first two components.

When all of the update components are assembled, each produces a check on the reasonableness and reliability of the other. Demand, supply, and vacancy updates must balance out or point to reasonable, explainable differences. The first two components of the six, while the single best descriptors of market changes, deal with only housing demand and cost of living changes. Thus there is no check on their accuracy if they are the only components to be updated. In one northern test county, for example, we found in comparing all the update components that the population/household change measures underestimated the county growth rate indicated by the combination of new housing starts and vacancy surveys. Additionally, the housing cost measure, which stresses changes in median household income, can mask very different changes in the critical low income and elderly submarkets. These submarkets are each specially updated in the final component section of this analysis. The results of these special updates are enhanced when placed in perspective with the overall pattern of housing market changes.

The Level 2 update analysis uses the same format and definitions of housing market components as are used in Level 1. However, while Level 2 introduces variables that are more reliable and comprehensive, they are also costlier to

initially assemble. Research into the development of Level 2 variables is discussed following Level 1.

Level 1 Update Analysis

Population and household formation. In order to determine the net change in the number of households in the county since 1970, two principal factors must be taken into account--changes in population and headship rates. Population projections are affected by migration, birth, and mortality rates. Headship rates, i.e., the propensity of individuals to become heads of households, are related to age, sex, marital status, and other personal characteristics.

The update data package available from the Illinois Department of Local Government Affairs or the Housing Research and Development Program includes two tables containing county population and household formation data. The formats for these tables are displayed on pages 69-70 in this handbook. Population projections for children (under 15) are not included to estimate changes in headship rates.

Table 1 enumerates the number of persons and households in the county by age and urban/rural location in 1970. All of the population data and the total number of households by age are taken from the 1970 census. To determine the number of urban and rural households in each age interval in the county, 1970 Census data on the total urban and rural population in the county are used in combination with 1970 State urban and rural headship rates by age intervals.¹

Table 2 displays the county's 1975 projected population and number of households. The term "projected" reflects the fact that the 1975 data presented in Table 2 are based on the county population projections prepared by the State of Illinois Bureau of the Budget (BOB).² These population projections are then converted into household projections. A comparative description of the BOB method and an alternative method using Bureau of the Census Series P-26 population estimates can be found in Appendix D.

The overall methodology used by the designers of this handbook to project the number of households in the county in 1975 is as follows: County and urban headship rates for each age interval in 1970 are calculated by dividing the number of heads of households in each age interval by the population in that interval. The county headship rates are then assumed to change at the same rate as either of two series (Series I and II) of projected national headship rates available from the U.S. Bureau of the Census. Series II posits a lower rate of household formation than does Series I. By utilizing both series, two estimates of 1975 county and urban headship rates can be derived and applied to the county's projected 1975 urban and rural populations. These calculations yield the projected number of households in the county in 1975, by urban/rural residence and age intervals, as shown in Table 2.

¹For these purposes, a county whose rural 1970 population was less than 5% of its total population is termed "all urban." "All rural" counties contained no towns of 2500 or more inhabitants in 1970. According to these definitions, Cook and Du Page counties are the only "all urban" counties in Illinois. There are 14 "all rural" counties: Putnam, Stark, Henderson, Brown, Scott, Calhoun, Cumberland, Edwards, Gallatin, Hardin, Pope, Johnson, Pulaski, and Massac counties.

²Estimates of current county total population, by year, are available from the Bureau of the Census, Series P-26. These statistics do not include age breakdowns. Moreover, the 1975 estimates will not be available until Summer 1976 (see also Appendix D).

Table 1. 1970 County Population and Number of Households by Age
and Urban/Rural Location
(Numbers of Persons and Households)

	Total	Rural	Urban
Population, total			
Aged:			
15-24 years			
25-34			
35-44			
45-64			
65+			
Population Living in Households			
Population Living in Group Quarters			
Households, total			
Household Head			
Aged:			
15-24 years			
25-34			
35-44			
45-64			
65+			

Source: Census of the Population: 1970, Vol. 1, Characteristics of the
Population, Part 15, Illinois - Section 1.

Table 2 . 1975 Projected Population and Number of Households
by Age and Urban/Rural Location

(Numbers of Persons and Households)

	Total	Rural	Urban
Population, total			
15-24 years			
25-34			
35-44			
45-64			
65+			

	Series I ¹			Series II		
	Total	Rural	Urban	Total	Rural	Urban
Households, total						
Household head						
Aged:						
15-24 years						
25-34						
35-44						
45-64						
65+						

¹While the Bureau of the Budget compiles only one set of population projections, two sets of headship rates (Series I and II) are projected by the U. S. Bureau of the Census. These headship rates account for the two series of Household projections shown here.

Source: Illinois Population Projections, Summary and By County, State of Illinois Bureau of the Budget, 1975.

Census of Population: 1970, Vol. 1, Characteristics of the Population, Parts 1 and 15.

Current Population Reports, Series P-25, U. S. Bureau of the Census.

Table 3 . Change in the Number of Households, 1970-1975
(Numbers of Households; Percents)

	Age of Household Head					Total
	15-24 years	25-34 years	35-44 years	45-64 years	65+	
Series I Projections						
All households						
Net change						
% change						
Rural households						
Net change						
% change						
Urban households						
Net change						
% change						
Series II Projections						
All households						
Net change						
% change						
Rural households						
Net change						
% change						
Urban households						
Net change						
% change						

Source: Tables 1 and 2 , pp. 69,70.

Table 3, to be completed by the analyst, shows the 1970-75 change in the number of households in the county. All the data required to complete Table 3 may be found in Tables 1 and 2, pages 69-70. For each age and urban/rural category, simple subtraction of the 1970 household estimates (from Table 1) from the 1975 projections (from Table 2) yields the net absolute change in the number of households. To calculate the percentage change in the number of households by age and urban/rural location, the analyst should divide the net change in the number of households in each category by the total number of households in 1970 in that category.

Both the population and household projections should be evaluated in the light of any locally-collected relevant data and the analyst's own expertise. For example, the methodology described above assumes that the ratio of the county's urban and rural populations remains constant and that county urban and rural headship rates change at the same rate. In a county experiencing rapid urban growth, one or both of these assumptions might well be invalid, and the analyst would be advised to modify the 1975 projections accordingly.

The following set of growth rates should provide a framework within which the analyst can evaluate his/her county's overall growth patterns:

<u>Area</u>	<u>Percentage Change in Households, 1969-1974</u>	<u>Annual Percentage Change in Households</u>
United States	14.3	2.9
Illinois	9.7	1.9
Johnson and Pope Counties	33.3 ¹	6.7

¹Highest rate of change among Illinois counties

During the same period, one county (Mercer) showed no change, while five other counties (Alexander, Calhoun, Hancock, Lee, and Macoupin) registered declines ranging from -.6% (-.1% annually) to -10.5% (-2.1% annually).

The analyst is cautioned, however, that the county's overall growth rate can mask relatively large changes in the number of households in particular age categories that cancel one another out when households of all ages are considered together. Table 3 can reveal the presence of such large gross changes in the number of households, if any, by age and urban/rural location.

MIGRATION. Population and household projections generally incorporate migration data but often do not allow the analyst to separate households who migrate from the rest of the county's population. This inability to separately enumerate migrating households can pose problems for the analyst in a county where the housing demands of in-migrant households differ significantly from those of households leaving the county.

The Illinois Bureau of the Budget population projections take account of migration due to changes in the local economy and job markets, but they do not separately identify the numbers and types of households moving into and out of each county. This handbook utilizes a relatively simple technique to determine a county's net migration, i.e., the difference between the number of people

moving into and out of the county. It is not currently possible to determine gross in- and out-migration by county by relying on existing data resources.

To calculate net migration, three types of data are required: (1) 1970 county population by age groups, (2) survival probabilities, i.e., numbers indicating the statistical probability of a death occurring to a member in a given age group, and (3) the projected 1975 county population by age groups. Table 4 displays the required data and the actual technique for calculating migration.

To calculate migration, the analyst should multiply the number of persons in each age group in 1970 by the survival probability for that age group (as shown in Table 4) to obtain the expected population in 1975 by age categories. For example, the number of persons in the 20-24 year age category in 1970 times the survival probability for that category yields the number of persons in the 25-29 year age category in 1975. The expected 1975 age group is then compared to the 1975 population projected by the Bureau of the Budget in that age group. Any difference between the expected survival estimate and the Bureau of the Budget projection is attributed to migration.

The migration data calculated by this method could reveal, for example, a net influx of children 5-14 years old along with a net influx of adults aged 30-39 suggesting an in-migration of young families. However, these net migration data cannot be disaggregated by age, race, and income categories. Accordingly, an analyst in a county experiencing a major net change in migration or who suspects that the housing needs of the community's in-migrants are not similar to those of its out-migrants can consult at least two local sources of information. First, school district officials may be able to perceive changes in school district enrollments other than what would have been expected were little migration taking place. Second, locally available information on employment changes and any larger-than-expected changes in welfare rolls may be helpful.

The changing cost of housing. A change in the cost of housing relative to other costs of living is an important indicator of changing housing conditions in general and, therefore, of the need for a more complete update of housing data. Particularly for lower income households, an upward change in housing costs can mean reduced expenditures for items such as food and medical care. Beyond this, higher housing costs can extend the life of existing substandard housing, reduce maintenance of existing standard housing, and help create overcrowded conditions by forcing families to double up. Thus the cost of housing is a critical factor and information about it should be kept current.

Since even a simple update of housing costs requires considerable effort, it should be performed only if the planner or local official has reason to believe that the housing market in his/her county has undergone change. As explained in the previous section, an important "early warning" is population change. In addition, an analyst may be aware of changes in the condition or cost of housing on his own.

In order to calculate changes in the cost of housing relative to income levels, three pieces of information are required: (1) change in income to provide a benchmark for evaluating changing housing costs; (2) the housing costs of renters; and (3) the housing costs of homeowners. Each of these will be considered below.

Counties in the St. Louis, Chicago, and Champaign SMSAs can use special "cost of shelter" and "family budget" data compiled yearly in the U.S. Bureau of Labor

Table 4 . Net Migration

(1) 1970 Population	(2) Survival Probabilities ¹	Age	(3) 1975 Expected Population (1 x 2)	(4) 1975 Bureau of the Budget Projected Population	(5) Net Migration (4)-(3)
0-4	0-4	5-9			
5-9		10-14			
10-14		15-19			
15-19		20-24			
20-24		25-29			
25-29		30-34			
30-34		35-39			
35-39		40-44			
40-44		45-49			
45-49		50-54			
50-54		55-59			
55-59		60-64			
60-64		65-69			
65-69		70-74			
70-74		75+			
75+					

¹Source: Vital Statistics Report, Final Mortality Statistics 1973, U. S. Department of Health, Education, and Welfare
For other sources, see Table 2, page 70.

Statistics' Handbook of Labor Statistics. This data compares gross income and shelter costs for three levels of family budget (low, intermediate, and high) by housing tenure. The attempt here is not to duplicate these labor statistics for other counties. Such an attempt would require a complex sampling, pricing, and weighting scheme. Moreover, little comparable data exist for 1970 to form the basis of an update. Consequently, the data gathering effort suggested here will be limited to those components of housing costs for which 1970 census data exist, or for items for which other 1970 data are readily available. However, counties covered by labor statistics should be particularly interested in the percentage rise in the cost of shelter and the proportion of total budgets spent for housing.

THE CHANGE IN HOUSEHOLD INCOME. Since government data are not available on changes in personal income by county since 1970, it is necessary to depend on other data sources. We will rely on two methods: a local survey of basic employers and data compiled by Sales Management Magazine (SMM). Since the data provided by SMM are readily available for all Illinois counties, it will serve as our primary source. Local data from employers will then serve as a check on its accuracy.

SMM estimates median household "effective buying income," or net income after taxes. Thus it is not directly comparable to the calculation of gross income in 1969 as done by the census. Nor are the 1975 SMM "effective buying income" figures directly comparable to SMM's own figures for 1970, due to a revision of its income data available in 1972 covering 1971 figures. Yearly income data published by SMM after 1972 are intercomparable. However, a simple adjustment can create 1970 and 1975 figures which are comparable.

To derive the 1970-75 change in net income using the SMM method, it is necessary to find (1) 1975 effective buying income (available in a Summer 1976 issue of SMM) and (2) 1971 effective buying income (available in the July 10, 1972 issue of SMM). This 1971 figure should then be multiplied by .945. Our research indicates that the result of this multiplication will closely approximate 1970 effective buying income in a manner which makes it comparable to the 1975 figures. The analyst then merely divides the 1970 effective buying income into the 1970-75 effective buying income difference. This provides a percentage change in income which can be used as a benchmark for judging changes in housing costs.

Table 5: Steps in Calculating Change in Household Income

Step 1	Find 1975 EBI (SMM, Summer issue, 1976)
Step 2	Find 1971 EBI (SMM, July 10, 1972)
Step 3	1971 EBI x 0.945 = 1970 EBI
Step 4	1975 EBI - 1970 EBI = 1970-75 EBI change
Step 5	1970-75 EBI change ÷ 1970 EBI = 1970-75 percentage change in EBI

(EBI = effective buying income)

This result can then be checked by interviewing major employers in the county and calculating average increases in wages and salaries over the last five years. It is necessary to sample only major industrial categories, since income for these workers tends to determine income in secondary industries such as the trades and services. The important industries can be distinguished by referring

to the 1970 census (PHC (1), Table P-3) or to the annual County Business Patterns published by the U.S. Department of Commerce. If possible, income data gathered from major employers should be broken down into white collar and blue collar components. For example, in Champaign County the University of Illinois is the largest single employer. The University was able to provide 1970 and 1975 incomes broken down into "academic" and "non-academic" categories. Other employers will use different categories of workers which should be related as closely as possible to white and blue collar groups or to the more finely detailed occupational classifications listing in the 1970 census (PHC (1), Table P-3). Changes in income should then be compared to the SMM method to see if the same trend holds.

THE COST OF HOUSING FOR RENTERS. For renters, the two primary components of the cost of housing are the price of rent and the price of utilities. In many cases, analysts will find the cost of some or all utilities included in the contract rent charged. Secondary indicators of renter housing costs include the price of furnishings, major appliances, and parking. Unfortunately, with the exception of certain appliances, the 1970 census did not ask for this information. Nor were respondents asked if appliances such as stoves or air conditioners were included in the rent paid. For these reasons an update of the secondary indicators of housing costs is not recommended.

Rather than surveying renter households, the suggested means of updating the primary components of renter housing costs, rent and utilities, is a sample of landlords. A base listing of landlords is available from several sources, including local telephone directories, realtors, and apartment-finding services. Since this method is likely to yield a list which is biased toward large landlords and more expensive units, it can be amended, if need be, by a sample of rental advertisements in newspapers as discussed in greater detail later in this section.

There are four important questions to be asked of landlords. First, how many units are being rented? Second, what is the current rent payment charged for each unit? Third, what utilities, if any, are included in the rent of each unit? Specify for water, gas, electricity, fuel oil, and the type of utility used for heating (the type of utility used for heating should be asked regardless of whether this is included in the contract rent). Fourth, for each utility included in the rent payment, what is the landlord's monthly or yearly expense? These questions should be specified by types of units. Key variables which will describe the units are (1) age of structure, (2) number of units in structure, (3) presence of elevator, and (4) number of bedrooms per unit.¹ A sample landlord rent survey questionnaire is shown in Table 6 (p. 77).

The procedure outlined above will provide a list of rents and cost of utilities included in the rent payment specified by type of unit. The second phase of the renter cost update provides data on those utility costs not included in the rent payment. There are two alternative methods for completing this phase. First, if sufficient data are available from the surveyed landlords on per unit utility expenses, these amounts can be applied to the remaining units whose rental payments include only some or no utility costs. The second method assumes that few landlords include utility charges in the rent payment. Current utility

¹This telephone survey might also include the number of vacant units by size and rent as part of the vacancy component of the update. See pp. 103-105.

Table 6. Landlord Rent Survey Questionnaire

Owner _____

Address of Structure _____

Age of Structure _____

Number of Stories _____ Elevator _____

Type of Unit	# of Units	Contract Rent	Utilities Included				Heating Utility
			Gas	Electricity	Water	Fuel Oil	
<u>Multifamily</u>							
Efficiency							
Occupied							
Vacant							
One Bedroom							
Occupied							
Vacant							
Two Bedrooms							
Occupied							
Vacant							
Three+ Bedrooms							
Occupied							
Vacant							
<u>Single-Family</u>							
One Bedroom							
Occupied							
Vacant							
Two Bedrooms							
Occupied							
Vacant							
Three Bedrooms							
Occupied							
Vacant							
Three+ Bedrooms							
Occupied							
Vacant							
Monthly/Yearly Utility Expense							

Table 7 . Utility Cost

Utility	Average Consumption ¹	Utility Rates		Average Consumption x Utility Rate = Average Cost	
		1970	1975	1970	1975
Water	14,560 cu.ft./year				
Electricity	100 kwh/month (limited) 250 kwh/month (moderate) 500 kwh/month (higher)				
Gas	10 therms/month (limited) 25 therms/month (moderate) 45 therms/month (higher)				
Heating:					
Electric	1000 kwh/month				
Gas	100 therms/month				
Fuel Oil	(not now available)	(price per 100 gals. of fuel oil #2, delivered)			
Coal	(not now available)	(price per delivered ton)			

¹Local data are preferable if available.

payments can be estimated by multiplying utility rates times estimated consumption. 1970 and 1975 utility rates are available from local power companies, charged on a sliding scale by consumption. The U.S. Department of Labor Statistics applies the average national consumption rates shown in Table 7 for a 5-room apartment or 5-6 room house. These national consumption averages can be used in the absence of local consumption data from power companies or the utility cost data from the landlord rental survey. It is recommended that for renters, 90% (the average of limited and moderate non-heating consumption) be used, depending on income level and renter housing unit sizes in the local county.

To calculate the 1970-75 change in utility costs for utilities included in the rent payment (or not included but estimated from the landlord rent survey), the analyst should first divide the 1975 costs by the 1975 utility rates to estimate average 1975 consumption. This consumption figure is then assumed to be valid in 1970, and, when multiplied by the 1970 utility rates, yields 1970 utility costs. To calculate the 1970-75 change in utility costs where few landlords include utility charges in the rent payment, the analyst should multiply the difference in the 1970 and 1975 utility rates by average consumption data (local or national).¹

At this point the local analyst will have data on 1975 rents, specified by unit type, and the 1970 to 1975 changes in utility costs. The 1970-75 increase in rents can be calculated by using 1970 census data on median gross rent and the 1975 data on contract rent if utilities are included in the rent payment or on contract rent plus utilities if they are not included. 1975 contract rent payments also can be compared to 1970 median contract rent as measured by the census.

Using the sampling procedure outlined above, it is likely that the analyst has undercounted certain renter categories and overcounted others (e.g., roomers or single-family rental units are two examples of undercounted renter categories). For larger counties, median contract or gross rent figures in the Public Use Sample (Levels 3 and 4 of the base analysis) can be re-calculated with the underrepresented classes excluded and the overrepresented class proportioned downward. For smaller counties, it is recommended that the 1970 census figures for contract or gross rent be increased by 10% to make 1970 figures comparable to 1975 for comparison purposes. This procedure assumes that proportional rent increases occur in the underrepresented categories of rental units. In many cases this will be true, reflecting proportional increases in property taxes and other expenses. However, the analyst may still be interested in getting some idea of price changes in the under-sampled categories as a check on this assumption. The quickest source of such information is newspaper advertisements, wherein units are usually specified by number of rooms, utilities, and rent charged. A sample of at least 30 units of the desired types is recommended. Data gathered from this source can then be compared to newspaper advertisements in 1970 and to the landlord survey data.

¹Those using Level 4 base data can get utility costs for 1970 from the Public Use data.

THE COST OF HOUSING FOR OWNERS. For homeowners, the most important variables of the cost of housing are property taxes, mortgage principal and interest payments, utilities, and maintenance costs. The key indicators for an initial update will be property taxes and utilities. The remaining indicators can be updated if time and data resources are available.

Increases in property taxes reflect higher tax rates, housing value inflation, and increases in housing value due to improvements. Median property taxes paid per single family residential unit in 1970 and 1975 should be available from county assessors. These figures can be compared to income changes. However, in order to understand the components of change, it will be necessary to select a sample of homeowners from the assessor's files.¹ For each property, the 1970-75 change in taxes levied and assessed valuation of land and improvements can be noted. (See Table 8.) In this manner increased taxes due to tax rate hikes can be distinguished from value changes. The analyst can then evaluate not only the property tax component of housing costs, but also get an idea of increasing housing values which will be reflected in sale prices and mortgage principal payments for new buyers. After sampling, the analyst who did not initially stratify (see footnote 1) should divide the 1970 assessed values into lower, moderate, and higher thirds, and observe the 1970-75 change for each. Overall, the usefulness of this information will depend on local assessment practices, particularly the frequency of inspection, amount of descriptive detail available, and estimated ratio of assessed valuation to market value. Thus, the analyst should familiarize himself/herself with local policies.

As a check on these data the analyst should select a sample of at least 30 asking prices for homes in 1970 and 1975 newspapers. Comparisons can be made for 2, 3, and 4 bedroom homes. Realtors, too, can be interviewed concerning the 1970 and 1975 sale prices of different types of homes as part of the survey suggested below.

For utility rate estimates, the analyst should start with the same method described above for rental cost estimates where utility costs were not included in the rent (Table 7). He/she will then have to adjust the figure for the low, middle, and upper third of the assessed value range depending on the local housing stock in each group. Keep in mind that single units have more surfaces that can lose heat or cooling than apartments, that lower value homes often are poorly insulated and thus cost more to heat and often have no air conditioning, and, finally, that while high value homes are well insulated, they usually have more area to cool.

The main source of data on the secondary indicators of housing costs (maintenance and mortgage principal and interest) will be realtors. To the extent possible, an attempt should be made to sample realtors who deal with different geographic and price segments of the housing market. Realtors should be presented with three different "typical housing types" that will distinguish typical lower-middle, middle, and upper-middle income homes. This descriptive profile should be presented in the upper section of Table 9 ("Descriptive Factors") by the analyst as guides to the realtors' estimates of cost factors which are sought in the lower section of Table 9. Typical age, heating unit, roofing and exterior-types, number of bedrooms and square footage, neighborhood conditions, and presence or absence of garage or basement should all be

¹It may be preferable to use a stratified sample as described on page 65, in counties where records are kept by housing type and by housing value range in all counties.

Table 8. Property Tax Sample Survey Display Table¹

	Lower Third of 1970 Range of Assessed Values		Middle Third of 1970 Range of Assessed Values		Upper Third of 1970 Range of Assessed Values	
	1970	1975	1970	1975	1970	1975
1. Tax Rate						
2. Value of Land/Unit						
3. Value of Improve- ments/Unit						
4. Total Value/Unit						
5. Tax Payment						
6. Utility Payment						
7. Total Tax Plus Utilities						

¹Analysts who stratified their sample by housing type would repeat this table for each housing type.

Table 9 . Realtor Survey Questionnaire

Housing Value Category

Descriptive Factors	Lower-Middle	Middle	Upper-Middle
ge at Type of Construction exterior Construction square Feet of Bedrooms arage asement eighborhood			
Cost Factors ¹			
arket Value 1975 1974 1973 1972 1971 1970			
Maintenance 1975 1974 1973 1972 1971 1970			
Mortgage Principle 1975 1974 1973 1972 1971 1970			
Mortgage Interest 1975 1974 1973 1972 1971 1970			

¹Utility and property tax data also can be collected annually.

considered in designing the description of these prototypical units. However, the types should represent, as nearly as possible, prevailing local standards for lower-middle, middle, and upper-middle income families (Table 9). In some counties the descriptive factors listed in Table 9 are not meaningful, and the analyst may want to use other factors more applicable to the housing in his/her county, and easily recognized by realtors. Realtors should be asked for estimated market values, maintenance costs, and average mortgage principal and interest payments. Since they must advise their clients on such matters, most realtors can make such estimates. Realtors can also be asked to estimate the same costs in 1970 and intervening years. For many realtors these back estimates will be a difficult task. For this reason, analysts may not be able to make immediate use of mortgage and maintenance data in updating housing costs. However, the survey will form a solid basis for future studies.

IN SUMMARY. With the information gathered above, the analyst is now prepared to estimate changes in the key indicators of housing costs and compare them to income changes. Using the Sales Management Magazine data, possibly corrected by a survey of major employers, the analyst has calculated the 1970-75 percentage change in effective buying income. In the case of renters, this change can be compared to the percent change in rent payments by using 1975 contract rent data from the landlord survey and 110% of 1970 Census data on median contract rent.¹ The 1970-75 percentage change in utility costs (calculated above) can also be compared to income changes. In the case of homeowners, the percentage change in effective buying income can be compared to the percentage change in property taxes and, possibly from the realtor survey, against the percentage change in maintenance and mortgage expenses by type of owner housing unit. From either the assessor data, the realtor survey, or the newspaper asking price survey, the percentage change in housing value can also be compared to income changes.

In evaluating his/her data, the local analyst should pay close attention to those categories of housing most likely to be inhabited by lower income families. In general, an increase in housing costs over household income of more than 2% may be considered a warning signal that housing conditions are deteriorating.² An increase of costs 5% or more beyond income increases should be considered a very serious situation. In either case, but particularly for the latter situation, a more extensive update of housing conditions is necessary.

Additions to the housing stock. Housing starts from 1970 through 1975 are added to the 1970 base data in order to develop preliminary estimates of the 1975 housing supply.³

In general, the collection of housing start data appears to proceed most smoothly if total starts are initially divided into four categories--conventional housing starts (i.e., single family residences, duplexes, condominiums, and multi-family rental units), new mobile homes, additions to the current

¹In many cases this change can be calculated for different sized rental units.

²For explanation see introductory paragraph, page 75.

³Of course, as discussed elsewhere in this Chapter, appreciation and depreciation of the housing stock, as well as demolitions, conversions, and other losses must also be taken into account.

Table 10. Annual Conventional Housing Starts

Type of Unit	1970 ¹		1971		1972		1973		1974		1975	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<u>Single Family</u>												
\$0-9999 value												
3 or less rooms ²												
4 rooms												
5 rooms												
6 or more rooms												
\$10000-14999												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												
\$15000-19999												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												
\$20000 or more ³												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												

¹Recording total starts after April 1st allows an update of all starts since the census. Recording total starts after January allows comparison of 1970 with later years. Note: usually there are very few starts from January through March.

²Square footage data or number of bedrooms may be substituted for number of rooms.

³See next page.

Table 10. Annual Conventional Housing Starts (continued)

Type of Unit	1970 ¹		1971		1972		1973		1974		1975	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
<u>Multifamily</u>												
\$0-9999 value ²												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												
\$10000-14999												
3 or less rooms												
4 rooms												
5 rooms												
6 rooms												
\$15000-19999												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												
\$20000 or more ³												
3 or less rooms												
4 rooms												
5 rooms												
6 or more rooms												

¹ See previous page.

² See previous page.

³ In many counties, this category should be further disaggregated, e.g., \$20000-24999, 25000-34999, and \$35000 and up. Value is listed on building permits as estimated construction cost. In the case of multifamily structures, the value per unit should be calculated and recorded. Square footage data or number of bedrooms may be substituted for number of rooms.

stock of public housing, and new group quarters housing. Further, wherever possible, housing starts are estimated separately, by several descriptive characteristics, for the urban and rural areas of a county.

CONVENTIONAL HOUSING STARTS. Estimates of conventional starts can be obtained from building permit and assessment records, zoning records, the U.S. Census C-40 series, and the F. W. Dodge Construction News reports, among other sources. The data available from each of these sources are subject to a number of limitations, however, and the analyst is advised to use more than one count.

Building permit and assessment records contain the most comprehensive data with respect to housing starts and should be used to complete Table 10. Building permit data are, of course, available only in permit-issuing areas. If county-wide zoning ordinances and building regulations are in force, permits will be on file for unincorporated areas; for towns, municipal records will have to be checked. The Census reports that 21 Illinois counties representing nearly 75% of the State's population have at least 95% of their land area covered by permit-issuing jurisdictions. Another eight counties (5% of the State's population) are better than 90% covered. In those counties where permits are not issued or issued only in the urban areas, the tax assessor's records become especially important. For each property on which new construction takes place, and for which the property owner is assessed, data on square footage, value, size, and urban/rural residence may be available.

Depending upon the total number of housing starts and the analyst's time and money constraints, building permit and assessment records either can be sampled or a full enumeration can be completed. However, regardless of whichever option is pursued, there is likely to be a significant number of new dwelling units built from 1970-1975, particularly in unincorporated areas where owners did not take out building permits nor register with the assessor, and hence these units will probably elude the analyst's search. Where zoning ordinances have been adopted, the zoning administrator's records may supplement permit and assessment data.

The analyst also should be wary of accepting all permit and assessment data at their face value. In many cases, permits are issued for buildings which are never, in fact, constructed. Cross-checking permit data with assessment and zoning records may ferret out some of the cases in which construction did not occur. Further, for those structures that are built, several months may elapse between the time the permit is issued and construction gets underway.¹

¹The analyst may have noticed that adding permits issued in the latest year as if they were all built and ready for occupancy when in fact some are not yet complete, can overestimate the total supply in matching updates in supply and demand. In addition, construction authorized by permits taken out in 1969 may only have been completed by the summer of 1970. If the volume of permits in 1969 and the latest year are equal, the analyst could assume that recent permits not yet built are cancelled by building in the base year on permits issued before 1970. If the permits issued in 1969 and the most recent year are unequal, a proportional amount of starts should be added to or subtracted from the update supply to account for the difference. If the analyst is aware of building material shortages, labor strikes, or money market shortages in either 1969 or the latest year, this should also be used in modifying total new supply.

County assessment data may also be subject to serious shortcomings. Some units may be underassessed and others, overassessed. Building improvements may not be reported or, especially in rural areas, improvements may not be recorded by type of structure (e.g., house or barn). In addition, actual building reassessments may lag scheduled reassessments by several months or more.

Finally, several notes on completing specific items in Table 10 should be added. First, many county assessors record much of their information on "locator cards." While these cards will facilitate the analyst's data gathering, comparable although less easily accessible data should be available in all other counties. Second, county assessors frequently do not file by date of construction or permit issuance. As a result, the analyst may find cards on units of pre-1970 construction. These should be ignored. Further, in some cases the year of construction must be inferred from the date the land with its present buildings was first assessed. In other cases, the type of structure must be inferred from the building's assessed value, or an included sketch. Finally, the analyst is encouraged to modify Table 10 as necessary to more accurately represent the individual county's pattern of housing starts. For example, the category "multifamily" could be further disaggregated into duplexes, 3 or 4 units per structure, and 5 or more units per structure, or square footage data may be utilized to supplement (or supplant) the number-of-rooms variable.

Two other sources of housing start data allow the analyst to quickly estimate the total number of annual housing starts. These sources may then be used to decide an appropriate sample size if full enumeration is not possible or simply as control totals against which to check the more disaggregated local data. However, because both of these data sources rely on building permit information, they suffer shortcomings similar to those found in the locally available permit data.

F. W. Dodge statistics, published by the McGraw-Hill Co. in New York City and available for individual counties, include the total number of units for which building permits have been issued, and the total square footage and value of those units, as well as a three-tiered classification of buildings by size of structure. No data on housing starts in non-permit-issuing areas are reported. Since Dodge data are available only on a subscription basis, and because they utilize the same primary sources as other more readily accessible data, most analysts probably will not wish to utilize these reports.

The number of housing starts in permit-issuing places by unit type (based on the number of units per structure) is also published in Construction Report Series C-40, "Housing Authorized by Building Permits and Public Contracts," by the U.S. Bureau of the Census. These data are available for individual counties and by towns if they issue permits.

The data sources described so far do not generally differentiate the tenure status of new housing units; and such disaggregation is not widely available at present.

The lack of current data crosstabulating households and housing units poses the analyst's most serious update problem with respect to housing starts. This shortcoming can be partially overcome in those counties where the Farmers Home Administration (FmHA) is relatively active. The FmHA data display not only structural characteristics (the type of unit, value, square footage,

and number of bedrooms) but also the unit's location and household characteristics, including income, race, age of head, and the number of persons in the household. FmHA data will be available, aggregated by county, from the Illinois Department of Local Government Affairs or the Housing Research and Development Program, University of Illinois at Urbana-Champaign. This information should prove particularly valuable in updating the housing needs of low and moderate income rural homeowners.

Finally, the analyst may wish to do a windshield survey of his planning jurisdiction in order to verify the actual number and types of new housing starts. Windshield surveys by persons knowledgeable about the local housing market could yield information on the total number of starts by location, type of structure, and, in some instances, estimated value and size.¹

Table 11 basically differs from Table 10 by allowing the analyst to summarize all of the conventional housing start update data and compare these with the 1970 stock. The characteristics of the 1970 stock can be taken from Level 3 base data, locally available 1970 data, or the following 4th Count Census tables (available from the Illinois Department of Local Government Affairs or the Housing Research and Development Program):

- Table 121. Value by Bedrooms by Race.²
- Table 147. Value by Bedrooms, Vacant Units.
- Table 164. Value by Bedrooms by Race, Spanish-American, Occupied Units.
- Table 124. Gross Rent by Rooms by Race.
- Table 167. Gross Rent by Rooms, Spanish-American, Occupied Units.
- Table 122. Contract Rent by Bedrooms by Race.
- Table 151. Contract Rent by Bedrooms, Vacant Units.
- Table 165. Contract Rent by Bedrooms, Spanish-American, Occupied Units.

If more than one source of data is utilized to complete the 1970 or update portions of Table 2, they should be noted along with any varying definitions. Percentage changes are calculated by dividing the number of post-census starts by the 1970 housing stock.

MOBILE HOMES. Current information on the number of mobile homes in the county is available from the county clerk's and county assessor's offices, the Illinois Department of Public Health, and the Mobile Home Manufacturers Association. In almost all instances, the county clerk's and assessor's records will provide the most detailed information.

The State of Illinois requires all mobile home owners whose homes are mounted on permanent foundations to pay real estate taxes. All other mobile home owners must pay special privilege taxes based on the size of their unit. Accordingly, mobile home owners must register with the county assessor or county clerk, and mobile home data should be available in one or both of these offices.

¹The analyst is also referred to the section of the Level 1 update dealing with vacancies. Some vacancy data (e.g., Polk and Postal Vacancy Surveys) may enumerate new but vacant housing units.

²No data on value by number of rooms, or square footage data, is available in the 1970 census.

Table 11. The Change in Conventional Housing Stock¹
(Number of Units)

Type of Unit	1970	Additions Since 1970		Conventional Stock 1970-75	Percent Change 1970-1975
		Total	Rural		
<u>Single Family</u>					
\$0-9999 value					
3 or less rooms					
4 rooms					
5 rooms					
6 or more rooms					
\$10000-14999					
3 or less rooms					
4 rooms					
5 rooms					
6 or more rooms					
\$15000-19999					
3 or less rooms					
4 rooms					
5 rooms					
6 or more rooms					
\$20000 or more					
3 or less rooms					
4 rooms					
5 rooms					
6 or more rooms					

¹This table shows the gross conventional housing stock. Conventional units lost through demolitions, conversions, and other causes must be subtracted before the update of conventional stock is complete.

Table 11. The Change in Conventional Housing Stock¹ (continued)
(Number of Units)

Type of Unit	1970	Total	Additions Since 1970		Conventional Stock 1970-75	Percent Change 1970-75
			Urban	Rural		
<u>Multifamily</u>						
\$0-9999 value						
3 or less rooms						
4 rooms						
5 rooms						
6 or more rooms						
\$10000-14999						
3 or less rooms						
4 rooms						
5 rooms						
6 or more rooms						
\$15000-19999						
3 or less rooms						
4 rooms						
5 rooms						
6 or more rooms						
\$20000 or more						
3 or less rooms						
4 rooms						
5 rooms						
6 or more rooms						

¹See previous page.

Data on mobile homes registered as real estate will be found in the county assessor's office. While the assessor's records may not specifically state that a unit is a mobile home, the analyst can usually make this determination by looking at a sketch of the unit, if included, and noting its dimensions. Very regular, rectangular dimensions, e.g., 12' x 60', 12' x 72', and 18' x 72', would indicate that the unit is likely to be a mobile home.

Data on mobile homes registered under the privilege tax should be available in the county clerk's office. These data should indicate the unit's location, size (e.g., floor area as determined by the manufacturer less tow hitch), and age.¹ The analyst can also determine the mobile home's tenure status: because all tax bills are sent to the unit's owner, the record for a rented unit will display both the unit's location and the owner's address. In some counties, information on the unit's occupants may also be available.

Together, county clerk's and assessor's data should allow the analyst to complete Table 12. Nonetheless, these data are subject to several qualifications. First, back data may be incomplete because the State legislature did not mandate mobile home registration before 1973. Also, it appears that many owners (especially on scattered sites) have yet to register their units. Finally, mobile homes owned by military personnel are not subject to any local taxation and therefore need not be registered with the county assessor at all.

The Illinois Department of Public Health can provide the analyst collecting mobile home data with some "control" totals. This Department licenses mobile home parks and should be able to tabulate the number of mobile home spaces in mobile home parks located outside home rule areas in each county in 1970 and currently.

The Mobile Home Manufacturers Association² records the total number of mobile homes sold in each county annually. However, two factors severely limit the usefulness of these data. First, the data do not indicate whether or not a unit is sold for residential purposes. Secondly, the buyer may live outside of the county in which the mobile home is purchased.

Finally, in counties with few mobile homes or few mobile home dealers, the dealers may provide reliable estimates of the number, size, and value of the annual additions to the county's mobile home stock.

PUBLIC HOUSING. Public housing, for the purposes of this handbook, is defined to include only those rental units under the control of local public housing authorities. The term "publicly assisted housing" encompasses all other federally assisted new low- and middle-income housing (e.g., 235, 236, and 221 (d)(3) housing), units built under the supervision of the Illinois Housing Development Authority (IHDA), and rehabilitations undertaken with federal or State assistance.

¹Effective July 1, 1976, all mobile homes should be taxed on the basis of size and age, so both of these statistics should then be available. Age is a particularly important variable with respect to mobile homes because these units have a shorter average life span than do conventional housing units.

²Address: 6650 N. Northwest Highway, Chicago, Illinois 60631.

Table 12 Annual Mobile Home Starts

		Additions to the Existing Stock					
1970 Stock ¹		1971	1972	1973	1974	1975	Total
<u>Urban</u> ²							
Owner Occupied							
0-500 sq.ft.							
501-1000 sq.ft.							
above 1001 sq.ft.							
<u>Urban</u>							
Renter Occupied							
0-500 sq.ft.							
501-1000 sq.ft.							
above 1001 sq.ft.							
<u>Rural</u>							
Owner Occupied							
0-500 sq.ft.							
501-1000 sq.ft.							
above 1001 sq.ft.							
<u>Rural</u>							
Renter Occupied							
0-500 sq.ft.							
501-1000 sq.ft.							
above 1001 sq.ft.							

¹1970 data, if available, can be collected at the same time 1975 mobile home data are compiled. Otherwise, the analyst can rely on Table 9, "Numbers of Mobile Homes, by County, by Tenure and Race," 4th Count Census of Housing (available from the Department of Local Government Affairs or the Housing Research and Development Program).

Also, the age of the 1970 stock should be tabulated since mobile homes, which constitute an increasingly large part of the housing market, have shorter economic lives than conventional housing units. Age of structure data may be available locally or can be taken from Table 137 and 177, 4th Count Census of Housing (also available from the Department of Local Government Affairs or the Housing Research and Development Program).

²The analyst can, of course, modify this table to include value and any other characteristics for which reliable data can be collected.

Table 13. 1970 Census Tables Available for Persons in Group Quarters

X = data available

Census Tables:	120	121	36	134 136	37	129	S1 (Special Reports) ¹
	Totals	Over 16 years old M F	Race White Negro	Rural Farm Non- Farm	Over 65 White Negro	Spanish Language	White M F Race Negro M F
<u>Institutional</u>							
Home for Aged	X						X X
Mental Hospital	X						X X
Other:	X						
Correctional							X X
Tuberculosis							X X
Chronic Disease							X X
Hospital							
Mentally							X X
Handicapped							X X
Physically							
Handicapped							X X
Neglected							
Children							X X
Juvenile							
Delinquents							X X
Total	X	X X	X X	X X	X X	X	X X X X
<u>Non-Institutional</u>							
College Dormitory	X						
Military Barracks	X						
Rooming House	X						
Other	X						
Total	X		X X	X X	X X	X	X X X X

¹Special reports of the census of population. Available for counties with more than 1,000 persons in institutional group quarters.

Source: Census of Population: 1970, Vol. 1 Characteristics of Population, Illinois.

No data with respect to public housing were collected in the 1970 Census. Local public housing authorities can provide the most readily available current data. These authorities are required to publish periodic statistical reports recording dwelling unit and tenant characteristics for all projects under their management. Also, authorities using federal funds must file reports with HUD concerning their operations. Note: As local housing authorities may serve municipalities as well as an entire county, some analysts may wish to contact the HUD offices in Springfield or Chicago for a list of all authorities within their planning jurisdiction.

The local housing authority's data can be expected to include, on a project by project basis:

- Location (township, or simply urban/rural)
- Year of Construction
- Type of Housing (e.g., elderly housing)
- Number of Units
- Average Square Footage per Unit
- Average Dollar Value per Unit

In addition, the analyst may be able to crosstabulate two or more of the following household characteristics (again, project by project): family size, age, income, and race.

As the analyst has usually included information on publicly assisted housing units in the update of conventional housing starts (or mobile homes), a separate analysis of these units would result in double-counting. Moreover, analysts wishing to undertake a closer examination of this sector of the housing market will find only sparse data. Regional HUD offices or the Regional Office of the Federal Home Loan Bank Board may be able to supply lists of all federally assisted housing by type at the county level. A phone call or a visit to the offices of all (or a sample of) local rental agents should allow the analyst to gain an accurate picture of this sub-sector. IHDA may provide further information.

GROUP QUARTERS. The Bureau of the Census defines persons living in group quarters as "all persons not living in households." Persons who live in the following types of arrangements are counted as group quarters residents:

- Institutions: correctional, mental hospitals, residential treatment centers, tuberculosis and other chronic disease hospitals, homes for dependent and neglected children, homes for unwed mothers, training schools for juvenile delinquents, detention homes.

- Non-Institutional group quarters: rooming houses, military barracks, college dormitories including rooming houses, religious group quarters, workers' dormitories, low cost transient quarters, commercial ships, general hospital or nurses' dormitories, institutional staff residences.

County data for group quarters are enumerated in the 1970 Census of Population. Table 13 shows how these data are displayed. In most counties the percent of the population living in group quarters will be small. Only in those counties where a large mental hospital, university, military base, or correctional facility, etc., is located will group quarters play a significant role in the housing market.

Table 14. Yearly Update Table for Group Quarters

	Capa- city	Occu- pancy	Vacancy	Waiting List	White		Black		Spanish	
					Male	Female	Male	Female	Male	Female
me for Aged										
1970										
1971										
1972										
1973										
1974										
1975										
ental Hospital										
1970										
1971										
1972										
1973										
1974										
1975										
ther stitutional										
1970										
1971										
1972										
1973										
1974										
1975										
ollege Dorms										
1970										
1971										
1972										
1973										
1974										
1975										
ilitary arracks										
1970										
1971										
1972										
1973										
1974										
1975										
Other Non- stitutional										
1970										
1971										
1972										
1973										
1974										
1975										
Total Change 1970-1975										

Since institutional group quarters are licensed and regulated by State and county agencies, for these units it is relatively easy to update yearly changes in the number of spaces occupied, vacant, or wait-listed, and, in some cases, even housing quality ratings. The county Department of Mental Health and Department of Children and Family Services cover most local institutional group quarters facilities.

Among non-institutional group quarters, the number of persons living in college dormitories and military barracks are easily updated each year by phoning officials at these institutions. Data on many of the other non-institutional group quarters facilities cannot be readily updated nor are the 1970 Census counts always reliable. This is especially true with respect to rural, migrant farm-worker housing, communes, and urban boarding houses.

Table 14 can be used for summarizing all group quarters update data.

Demolitions, conversions, mergers, and other losses to the housing stock.

Demolitions, conversions, and mergers are all the result of deliberate human action to change or reduce the current stock of housing. Losses of standard housing units also may be caused by fires, floods, and other natural disasters. Overall, these changes and removals usually affect only a very small percent of the current stock of housing, although they can cause severe housing supply dislocations in particular submarkets or, in the case of natural disasters, entire communities.

The following definitions, utilized by the U.S. Census Bureau, are employed in this handbook:

1. Units lost through demolition: Any housing unit torn down on the initiative of a public agency or as a result of action taken by the owner.
2. Units changed by conversion: The creation of two or more housing units from fewer units through structural alteration (e.g., adding on to the unit or installing partitions) or by a change in use.
3. Units changed by merger: The combining of two or more housing units into fewer units through structural alteration or a change in use.
4. Units lost through other means: Any housing lost through a means other than demolition or merger:
 - a) lost by changing to group quarters
 - b) vacant and unfit for human habitation
 - c) vacant, slated for demolition or rehabilitation
 - d) changed to a nonresidential use
 - e) moved from site
 - f) destroyed by fire, flood, or other natural causes or disasters.

Demolitions generally account for the largest number of removals. Units may be demolished by a public authority, for example, to make way for a new public facility, or by private enterprise.

Information on demolitions can be obtained from a number of sources although records with respect to this activity are often incomplete. The number of public demolitions may be determined by studying county and municipal capital and operating budgets or policy statements. Demolitions by private enterprise (and public demolitions contracted to private firms) may be estimated from demolition permit data available at county or municipal building, code enforcement, and zoning administration offices. Wrecking company officials also may be surveyed.

However, no matter which sources of data the analyst consults, he/she is unlikely to be able to detail the characteristics of those housing units that have been destroyed or are scheduled for demolition. Some comparisons between building and demolition permits and tax assessor's records may provide a clue to unit value, unit size, and tenure status. In other cases, personal interviews with housing inspectors may prove most fruitful.

TABLE 15. UNITS LOST THROUGH PUBLIC AND PRIVATE DEMOLITIONS

Type of Unit ¹	Public Demolitions					Private Demolitions						
	1970	1971	1972	1973	1974	1975	1970	1971	1972	1973	1974	1975
Occupied, Owner												
Less than 4 rooms ²												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
4-5 rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
6 or more rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												

¹Units may also be disaggregated by urban/rural location. Demolitions are more likely to occur in the urban areas of a county.

²Estimated square footage data may be substituted for number of rooms.

Table 15. Units Lost Through Public and Private Demolitions (continued)

Type of Unit	Public Demolitions					Private Demolitions						
	1970	1971	1972	1973	1974	1975	1970	1971	1972	1973	1974	1975
Occupied, Renter												
Less than 4 rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
4-5 rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
6 or more rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
Vacant												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
4-5 rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												
6 or more rooms												
< \$5000 value												
5000-9999												
10,000-14,999												
15,000 or more												

Table 16. Annual Changes and Losses to the Standard Housing Stock Through Demolitions, Conversions, and Mergers

	1971	1972	1973	1974	1975	Total
Units Lost Through:						
Demolitions						
Public						
Private						
Natural Disasters						
Other Losses						
Total Losses						
Units Changed By:						
Conversions						
Mergers						

Hence, while the analyst should aim to complete Table 15, substantial gaps in information on county demolitions are likely to remain. In many instances, the analyst will be able to do no more than estimate the total number of demolitions annually. Moreover, because many demolished units are long-term vacancies, or would have been abandoned shortly anyway, the extent to which the standard housing stock is affected by these losses is extremely difficult to determine.

Estimates of annual losses caused by fires, floods, and other natural disasters may be obtained from local fire departments, civil defense agencies, and, in some cases, insurance company officials. Analysts should strive to complete a table on these losses similar to Table 15 on demolitions. Again, although records are likely to be incomplete, the analyst especially should attempt to estimate the total number of these losses and the number that reduce the standard housing stock.¹

The number of conversions is usually so small that these changes in the housing stock have no appreciable effect on the housing market. It is generally believed that conversions from residential to commercial units and commercial to residential units cancel each other at the city or county level, and, similarly, the number of conversions overall is assumed to roughly equal the number of mergers.

However, in large urban areas, especially Cook County, one type of conversion has recently been very apparent, causing market changes in housing supply and cost. This is the conversion from rental apartments to owner-occupied condominiums. In Cook County, tenure conversion data can be enumerated from current assessment records and cross-checked against old assessors' parcel identifications to determine both new condominium construction and conversions. Analysts in other counties experiencing rapid condominium growth may wish to follow a similar procedure.

In sum, the analyst undertaking a Level 1 update analysis should be able to complete Table 16. Table 16 enumerates the annual losses or changes in the standard housing stock resulting from demolitions, conversions, and mergers but displays no other housing unit/household characteristics. In some counties, analysts will be able to partially complete Table 15 and a similar table for losses from natural disasters. In most instances, however, comprehensive data cannot, at present, be readily or easily assembled.

¹To determine whether or not a unit is substandard, the analyst can utilize the definitions of substandard employed in Chapter II

Housing appreciation and depreciation. No data are collected in either the Level 1 or Level 2 updates on housing appreciation and depreciation.¹ Appreciation is an increase in the value of a housing unit over and above "normal" inflation. A unit can appreciate (through no effort by the owner) due to locational amenities or other factors, or as a result of improvement (by the owner) adding to the quality of the living environment or the quantity of living space. Similarly, a unit can depreciate because of locational changes and/or a disinvestment in the property. Depreciation can result in the unit's becoming substandard or simply losing value.

No methods of measuring appreciation and depreciation changes with secondary data have been uncovered by our research that are successful enough to warrant the high cost in time and effort that would be involved. It appears that the only ways to successfully update appreciation and depreciation are to use professional inspections of housing units and/or to mail questionnaires to resident households. Both methods fit a Level 3 update analysis since they are very costly propositions involving the collection of primary data.

¹One exception to this statement is the property assessment data described in the section on "Changing Cost of Housing." In counties where appraisals and reassessments for additions to the housing are caught and recorded, and in counties where general reassessments for property taxing purposes accurately reflect changing sales prices (that in turn reflect locational and housing type investment or disinvestment), the analyst has a good overall picture of housing appreciation or depreciation.

Vacancies. Three methods of measuring vacancies are described in this section:

- 1) City or county directories, e.g., the Polk and Johnson directories
- 2) Postal vacancy surveys
- 3) Drive-by and telephone surveys

Polk or Johnson directories are available for a limited number of cities and counties in Illinois from the HUD regional office. These directories may be used to analyze vacancy data either by employing a sampling procedure or by purchasing summary tables from the company which compiled the directory. However, where such directories are not already available, other less costly methods of analyzing vacancy data are suggested. In general, postal vacancy surveys supplemented by locally administered drive-by or telephone surveys should prove to be the fastest, least costly method of obtaining vacancy information. One other source of vacancy information, utility company data, can usually be obtained only through negotiations with local power companies. Utility data to update vacancy statistics are discussed in Level 2 of this chapter.

1) CITY DIRECTORIES. At least two private companies will contract with a county agency to gather information on local households. These companies, the R. L. Polk Company of Detroit and the Johnson Publishing Company of Loveland, Colorado, publish city (and county) directories which enumerate, by name and address, all residents of the city (or county). The directories list households alphabetically (by last name) and by street, and, since vacant units are also enumerated, the housing analyst can observe the number of units on a specific street or in one area that are vacant. In addition, the Polk Company has available a computer program which they will use to produce a variety of Census type tables that display, among other data, vacancy information. The cost of obtaining this information is approximately twenty cents per household, and it can be obtained only for cities (or counties) which have already had a directory compiled.

Polk Company data tables are on file in HUD's Chicago office for the following ten cities: Aurora, Bloomington-Normal, Decatur, Elgin, Joliet, Peoria, Rockford, Rock Island-Moline, Springfield, and Waukegan. Copies of the directories for these cities should be available through city officials or the local Chamber of Commerce. The tables are available from HUD at no cost to county agencies.

Other cities and counties also have been surveyed by either the Polk or Johnson companies. According to a representative of Johnson's, approximately forty Illinois "places" have been surveyed and directories for these places produced.

The problems that a county or city can encounter in using directories to obtain vacancy data are numerous. First, the surveys are far more expensive than most planning agencies can afford (for example, Champaign-Urbana's survey, done in 1972, cost approximately \$50,000). Second, they take a long time, averaging five months to compile. Third, many rural residences are not enumerated. In addition, the analyst using a directory is unable to determine if a vacant unit is intended to be a rental or owner-occupied unit.

A few further problems should be noted. Like postal vacancy surveys, the directory surveys are done by house-to-house canvassing. Thus, the accuracy of the directory method, depending on the quality of enumeration, is little different

from that of the postal vacancy survey which is much cheaper. Also, no information is provided on unit size, value, or rent. All vacant units are counted whether they are habitable or not, and uninhabitable (or not for sale or rent) units are not separated from total vacancies. Finally, if only a directory is to be used to analyze vacancies, a sampling procedure must be relied upon as it would be virtually impossible in most counties to hand count all housing units listed in the directory. Sampling (or full enumeration) can be avoided only by using "information package" computer programs such as the Polk computer program mentioned earlier, at further expense to the housing analyst's agency.

Thus, unless directories are currently available in the analyst's county or unless the tabulated information is available from HUD, an analyst is not advised to seek to have this information compiled if the sole purpose is to obtain vacancy data.

2) POSTAL VACANCY SURVEYS. In Illinois, Postal Vacancy Surveys (PVS) are conducted by the Federal Home Loan Bank (FHLB) and by HUD. The Chicago offices of both of these agencies will provide copies of a county's PVS to housing analysts at no cost if a PVS already has been conducted in the analyst's county.

As the name implies, a Postal Vacancy Survey is conducted by the local post office. The survey is conducted by mail carriers on one day each year. (This day may fall anytime within a specific two-week period, although the same period is not used in each county). As the mail carriers make their mail deliveries on the survey day, they record the total number of "possible deliveries," vacant units, and units under construction for: residences (one delivery per building), apartments (buildings with multiple deliveries), and mobile homes. The local postmaster then sums all of the data obtained by individual mail carriers and reports these grand totals to HUD and the FHLB in the following form:

	All Deliveries		Residences			Apartments			Mobile Homes			Units
Postal	Total - Vacant		Total-Vacant			Total-Vacant			Total-Vacant			Under
Area	No.	%	No.	%	New	No.	%	New	No.	%	New	Construc.
												Res. Apt.

Note that "new vacancies" are recorded for residences and apartments. These are simply the vacancies in newly constructed units which have not yet been rented or sold for the first time. "Boarded up" (dilapidated) residences or apartments are not counted as vacancies.

Postal surveys are available for all SMSA counties, Kankakee, Iroquois, and Jackson counties, and for certain selected areas or counties which are relatively large. (NOTE: Relatively large usually means any place which has four home offices of savings and loan associations: this definition is employed by the FHLB which uses PVS data to help determine its own policies with regard to savings and loans.)

In counties that do not have a PVS available, the analyst might arrange that one be taken either through the local postmaster or with the assistance of the local Congressional representative. In requesting a survey, the analyst should remember that because conducting a PVS is time consuming and burdensome to a local post office, some postmasters may be rather reluctant to agree to conduct one.

As the typical PVS costs HUD and the FHLB \$3/route and \$6/station, these amounts would be good minimum costs to use in estimating the expense involved in contracting with the local post office for a PVS.

Although relatively readily available, PV surveys do have several shortcomings. First, no crosstabulations of vacant units by size and rent or selling price are available. Second, the surveys are done only from postal stations which the Postal Service considers to be "metropolitan" stations. Thus, vacancy data in rural areas are not available (for example, even in SMSA counties, PVS often cover no more than 88% of all units). Third, units are not distinguished by tenure status; only multi-family or single family categories are available. In addition, many apartment units are simply overlooked, or the mail carrier is unable to determine whether or not they are actually vacant. Consequently, total apartment units can be substantially undercounted, and many vacant apartment units will not be recorded as vacant. Fourth, military housing and institutional housing are both counted as apartments, whereas in most Census data these units are enumerated as group quarters. Finally, people without mail delivery service are not included in the survey.

In spite of these inaccuracies and limitations, PVS data are the cheapest and easiest to acquire and as useful as any other data source in pointing out trends in vacancies in the local market. The analyst is able to determine whether overall vacancy rates are within "acceptable" ranges (1% to 3% for owners' units; 4% to 6% for renter units), although these overall rates do not indicate whether the vacancy rates for certain sizes of unit or rent and value categories are acceptable. However, when supplemented by local surveys undertaken by the analyst, the PVS generally provide very useful estimates of current vacancy data.

3) LOCAL SURVEYS. The analyst can undertake several types of surveys to obtain vacancy estimates. As described elsewhere in this chapter, many of these surveys may be used to collect other types of housing data at the same time as vacancy data are enumerated. The "drive-by" survey can prove particularly valuable in counties with relatively few housing units. For example, a virtually complete survey of one county of 200 square miles area and with approximately 2500 housing units was conducted by two of our analysts in one car in one day. The analysts estimated the number, type, and approximate size and value of the county's vacant units. In general, when taking a drive-by survey, it is preferable that at least one member of the two-person team be familiar with the local housing market to improve the accuracy of estimates of unit value, vacancy, etc. For example, the assistance of real estate sales personnel who are experts on each subarea of the county will greatly improve the accuracy of estimates of vacancies obtained in drive-by surveys.

While no hard and fast rules can be used to determine whether a unit is vacant or not vacant, a number of indicators can be useful. Units with no window curtains or other signs of occupancy inside may be vacant. In addition, units on lots with high grass and weeds, an accumulation of mail and newspapers, and a "For Sale" sign may be vacant.

Drive-by surveys are not particularly accurate with respect to multi-family structures, the individual units of which are often difficult to distinguish. Those counties with a high proportion of multi-family structures may wish to undertake a walk-by survey so that the surveyors may enter these buildings to check more closely for vacancies.

In larger counties, a drive-by survey could be undertaken in certain representative sample areas rather than the entire county. (See introductory sections to

this chapter for further discussion.) Additionally, to obtain detailed information on rental vacancies, the analyst can survey local landlords, rental agents, and/or management firms. Similarly, local realtors could be surveyed to obtain information about vacant for sale units. Newspaper advertisements and multiple listing services may further supplement these data.

In sum, the Postal Vacancy Survey can provide a reasonably accurate estimate of the county's overall vacancy rates which can be supplemented (and checked) by local surveys done by the analyst. Because PVS data are not as reliable with respect to renters as they are with owners, even a phone survey of landlords should prove to be informative. Overall, the local surveys will allow a more in-depth analysis of vacant units than does the PVS, as local surveyors may obtain data on unit size and value, among other characteristics.

Both local surveys and the PVS have the advantages of being inexpensive and quick and relatively easy to obtain, and yielding data that is sufficiently reliable for most housing planning purposes. Moreover, when these surveys are performed on an on-going basis, they can supply data on vacancy trends rather than merely a point-in-time estimate. In fact, since for many counties PVS data already exist annually from 1971 on, a study on vacancy trends often may be undertaken immediately.

Tables 17 and 18 are suggested formats to use in presenting and summarizing vacancy data. The information for Table 17 can be obtained from a postal vacancy survey. Table 18, which can provide a more detailed view of the county's vacancies, will require more than a postal vacancy survey and therefore will necessitate an additional expenditure of time and money.

Table 17. Total Vacancies

	Total Number of Units	Total Units Vacant	Newly Constructed Vacant Units
Total			Not Available
Single Family Units			
Multifamily Units			
Mobile Homes			Not Available

Table 18. Units Vacant by Value or Rent and Number of Bedrooms

Type of Unit	Number of Bedrooms						Total
	0	1	2	3	4	5+	
Vacant for Sale							
\$0 - 4999							
5000 - 9999							
10,000 - 14,999							
15,000 - 19,999							
20,000 and up ¹							
Vacant for Rent							
\$0 - 49							
50 - 99							
100 - 149							
150 - 199							
200 and up							
Mobile Homes							
\$0 - 4999							
5000 - 9999							
10,000 and up							

¹ Additional value and rent categories may be included, depending on the county's housing market.

Submarket updates. Two household submarkets--lower income and elderly--usually account for most of the households suffering from any one housing need and for most of the households suffering multiple housing needs (with the possible exception of crowding and combinations of needs which include crowding.) This situation has been recognized by state and federal planners who have geared housing and support service programs to these submarkets. For these reasons, local analysts will want to identify and update the market conditions of lower income and elderly households in greater detail than may be possible for all households in the county.

While some analysts may be tempted to proceed with these specialized updates without completing the previous update components, it is impossible at this time to update the lower income and elderly submarkets without first updating the population and household component and the cost of housing to annual buying power component. Moreover, the overall update is recommended to place these special submarket needs in perspective relative to recent overall housing market changes and, hopefully, to prevent erroneous conclusions.

LOWER INCOME HOUSEHOLDS. The method described in this section serves two analytic purposes: first, to determine the percent and number of lower income households as defined in the 1974 Housing and Community Development Act; and, second, to examine the trend in the growth or decline of low income households. The data used in this analysis is found in the Survey of Buying Power published in early summer each year by Sales Management Magazine. (Note: The 1970 data should be corrected as described in the update section on "Changing Cost of Housing" in order to insure comparability.)

The first step in this analysis is to calculate income "eligibility thresholds" for each year 1970-1975. To do this, the definitions of poverty adopted in the 1974 Housing and Community Development Act are used. Lower income thresholds are defined as those households whose income is less than 80% of median household income in the area; very low income households are defined as those households whose income is less than 50% of the area's median household income. Median "effective buying income" (EBI) as found in the Survey of Buying Power is the operational definition of median household income used in this section of the handbook.

The calculations can be grouped into 3 sections:

1. The low and very low income eligibility thresholds for each year.
2. The percent of households that fall below the eligibility thresholds each year.
3. The number of households that fall below the eligibility thresholds each year.

To show how to calculate each of these steps, the following table and concurrent example are offered.

The EBI data for each county for each year will appear as follows:

		% of Households Distributed by EBI Category					
	Median EBI	\$ 0- 2999	\$3000- 4999	\$5000- 7999	\$8000- 9999	\$10000- 14999	\$15000+
Example:	\$10540	17.9%	11.0%	12.3%	8.6%	23.3%	26.9%

The analyst should then perform the following calculations:

1. Multiply 0.80 x median EBI to calculate low income eligibility threshold ($0.80 \times \$10540 = \8432) _____
2. Multiply 0.50 x median EBI to calculate very low income eligibility threshold ($0.50 \times \$10540 = \5270) _____
3. Determine % of households in each category below the low income eligibility threshold:
 - % in \$ 0 - 2999 category; (.170) _____
 - % in \$3000 - 4999 category; (.110) _____
 - % in \$5000 - 7999 category; (.123) _____
 - [% in \$8000 - 9999] x $\left[\frac{\text{line 1} - \$8000}{\$9999 - \$8000} \right]$; ($.086 \times .216 = .019$) _____
4. Add each line of (3) and multiply by 100 to get total % low income
 $((.170 + .110 + .123 + .019) \times 100 = 42.20\%)$ TOTAL _____
5. Determine % of households in each category below the very low income eligibility threshold:
 - % in \$ 0 - 2999 category; (.179) _____
 - % in \$3000 - 4999 category; (.110) _____
 - [% in \$5000 - 7999] x $\left[\frac{\text{line 2} - \$5000}{\$7999 - \$5000} \right]$; ($.123 \times .09 = .011$) _____
6. Add each line of (5) and multiply by 100 to get total % very low income. $((.179 + .110 + .011) \times 100 = 30.00\%)$ TOTAL _____
7. Repeat calculations (1) - (6) for each year 1970-1975 and enter in Table 19.
8. Convert % very low income households to total number of households: multiply line (4) x total households found in the Survey of Buying Power. _____
9. Convert % very low income households to total number of households: multiply line (6) x total households. _____
10. Repeat lines (8) and (9) for each year 1970-1975 and enter in Table 20.

Table 19. Low Income Eligibility Thresholds

Year	Median EBI ¹	80% of EBI	% Families Below 80% EBI	50% of EBI	% Families Below 50% EBI
1970					
1971					
1972					
1973					
1974					
1975					

Table 20. Low Income Households

Year	Number of Households	Number of Lower Income Households	Number of Very Low Income Households
1970			
1971			
1972			
1973			
1974			
1975			

1. EBI=Estimated Buying Income.

In conclusion, two notes should be added. First, the definitions of "low" and "very low" income used here are relative ones. Many families defined as needy by this method would not be eligible for AFDC, SSI, or other means-tested public assistance programs because these programs use absolute, not relative, definitions of poverty. Since this is the case, it is not recommended that the analyst attempt to supplement the data obtained using this method with information about the numbers of families on the public assistance rolls. Second, the definitions of "low" and "very low" income used here do not rule out the case of a lower income household in a wealthy county being better off, in terms of its real purchasing power, than a moderate income household in a very poor county.

ELDERLY HOUSEHOLDS. This section not only will update elderly housing and household characteristics as they apply to the three major housing needs drawn from the 1970 Census, but it also will describe research underway to enumerate specialized elderly housing needs.

As the analyst may be aware, the elderly face specialized housing needs as a result of the increased disabilities associated with old age. Measures of these special needs, which are not enumerated in the census, can be grouped as follows:

1. Measures of the elderly person's or household's ability to function independently in conventional housing.
2. Measures of the quality of the elderly person's or household's housing environment to support independent living as chronic disabilities increase.
3. Measures of the quality of support services in and to the elderly person's residential neighborhood that may extend independent living.

A large proportion of the elderly population cannot function in otherwise adequate conventional housing due to chronic disabilities. On the other hand, these elderly citizens do not require a totally dependent nursing home environment.

Federal, state, and local programs are beginning to recognize the needs of this special group. Congregate housing programs (shared eating, living, health, and social settings) and support services that visit the elderly in conventional housing are two prime examples. Research (supported by a grant from the Illinois Department on Aging) is also underway at the University of Illinois to develop a housing analysis utilizing secondary data to disaggregate the elderly population by functional capacity and to measure the quality of elderly housing environments and support services. This analysis, in which some of the members of the research team writing the handbook are involved, should be complete by fall 1976. The elderly market update analysis that follows here is designed to help the local analyst to decide if undertaking the more specialized update analysis now being developed is of high priority in his/her county.

Elderly Population and Household Formation. In most counties, the number and demographic characteristics of elderly households in 1975 are likely to be very similar to those recorded in the 1970 census. The principal reason for this similarity is that the elderly are far less mobile than are younger persons. The elderly seldom need to follow job markets because they are

largely retired and living on pensions, social security, or investment income. In addition, they also often lack the physical health or income to afford lengthy or frequent moves.

We can expect the survival rate for the elderly reaching age 60 in and since 1970 to remain relatively constant for two reasons. One, the elderly reaching age 62 since 1970 were all born in years in which the birth rate was relatively constant; and, two, most life-extending medical advances have occurred well within the life span of all elderly persons alive today. Two possible sources of changes in the size and characteristics of the elderly population are:

1. A slight increase in the number of households headed by elderly persons resulting from fewer elderly living with children or younger siblings.
2. A slight increase in elderly migration within regions from rural to urban areas. Depending on the presence or lack of urban centers in a county, this might result in slight in-migration or out-migration.

Overall, most counties are likely to find a larger loss or gain of their younger households from 1970 to 1975 than of their elderly households. Thus older households, as a group, while not changing much in absolute size, can change in relative size and importance with respect to the total number of the county's households requiring housing assistance.

To check elderly household changes, the analyst must look at data on both 1970 households and 1975 household projections. The number of elderly households with head age 62 or over in 1970 can be taken from Table 39 of the Fourth Count Census of Housing. Counties completing a level 3 base analysis can derive 1970 data on the elderly households above 62 from Tables 1 and 2 (pp. 56-57). In either instance, the number of 1975 households headed by individuals 62 to 65 years old must then be estimated and added to the 65 and over household estimate for 1975. This is done by assuming that the ratio of the number of persons 62-64 years to the population aged 60-64 has remained constant between 1970 and 1975. Table 21 explains all of the necessary calculations and derives the net change in the number of elderly households from 1970 to 1975. The net change is computed by simply subtracting 1970 from 1975 estimates. The percent change in the number of elderly is the result of dividing the net change by the total 1970 number of elderly households.

In addition to the 1970-1975 increase in the number of elderly households just updated, the percentage of the county's elderly population relative to its total population can be derived from 1970 to 1975. For 1970, the percentage of elderly can be derived by dividing the population 62 years and over by total population in Table 35, Census of Population: Characteristics of Population, Illinois. For the 1975 percentage of elderly, add line 4 Table 21 (1975 elderly age 62-64) to the 1975 population elderly 65 years and over (Table 2, p. 70) and divide the sum by total population 1975 (also Table 2, p. 70). Either a high percentage elderly relative to the total population in 1970 or 1975, a rapid 1970-1975 growth rate in the relative percent elderly, or a high absolute growth rate 1970-1975 in elderly households can signal that the more detailed update mentioned in the introduction to this submarket is warranted. The following rates can be used to make this assessment:

Table 21. 1975 Estimates of Elderly Households 62 and Over,
and Changes in the Number of Households 62
and Over 1970-1975

1. Subtract 1970 population 65 and over from 1970 population 62 and over to get 1970 population age 62-64 (Table 35)	_____	_____
2. Divide the results of step (1) by 1970 population age 60-64 to get the proportion 62-64 of the age cohort 60-64	_____	_____
3. Enter latest Bureau of the Budget estimates of 1975 population 60-64	_____	_____
4. Multiply (2) x (3) to get 1975 population estimate age 62-64	_____	_____
5. Multiply (4) by 0.63 and 0.62 (Series I and II headship rate projections) to get estimates of number of households age 62-64 in 1975	_____	_____
6. Enter and add Series I and II household projections for persons 65 and over from Table 2, page 70 to get total households 62 and over in 1975	_____	_____
<hr/>		
	TOTAL	_____
7. 1970 census households 62 and over, either from Tables 1 and 2, pages 55 and 56, or Table 39 of the 4th Count Census of Housing	_____	_____
8. Net change	_____	_____
9. Percent change	_____	_____

Sources: Illinois Population Projections, Summary by County, State of Illinois Bureau of the Budget, 1975.

Census of Population: 1970, Vol. 1 Characteristics of the Population, Illinois, Table 35, 15-257.

Current Population Reports. Series p-25, U.S. Bureau of the Census.

Census of Housing: 1970, Fourth Count, for Illinois, Table 39.

Elderly Population as a Percent of Total Population,
1970 or 1975, 62 Years and Over

Low	7.0 - 11.9%
Median	12.0 - 15.9%
High	16.0 - 23.0%

A percentage increase in the elderly population relative to the total population of greater than 1% annually can be considered high.

An increase in the number of elderly households greater than 1.5% annually would be termed a fast growth rate.

Low Income Elderly. Elderly below the poverty level represent a critical update group as they are likely to have multiple housing and support service needs. Unfortunately, the Sales Management Magazine data used to update total low income households do not analyze elderly households separately.

In lieu of a separate update of low income elderly, the local analyst can use the trends observed for all low income households while keeping in mind the proportion of total poverty level households that were elderly in 1970 and by assuming that this ratio still holds today. Table 22 shows how to calculate the number of elderly below the poverty level in 1970 as a percent of the total population below the poverty level in 1970. As a rule of thumb in interpreting the severity of the percent of elderly in poverty in Illinois counties in 1970 (Table 21 line 4), the following table may be useful:

Percent Persons Age 65 and Over with Incomes Less Than
1970 Poverty Level

Low	16 - 24%
Median	25 - 35%
High	36 - 45%

In counties with a high percent of elderly households below the poverty level, and a steady or growing proportion of the total population falling into the low income levels (Table 20), low income housing and support service programs may be of high priority for the local planner and the more extensive analysis of elderly housing and support services is recommended.

Elderly household Cost of Housing to Cost of Living. For those counties in the Chicago, St. Louis, and Champaign SMSAs, the Bureau of Labor Statistics' Handbook of Labor Statistics provides yearly housing cost and Gross Income estimates for retired couples on a low, intermediate, or high budget. Although this measure has several faults (not the least of which is the use of couples instead of single persons who often have the most severe needs), it is by far the most complete yearly update of elderly cost of housing to cost of living available from secondary data sources.

Other counties must look at the overall cost of housing to buying power update in conjunction with the percent of elderly households below the poverty level in 1970 (both discussed above). For example, if the cost of housing is rising

Table 22. Percent of Elderly Below Poverty Level, 1970^{1,2}

1. Total population 1970	_____
2. Total elderly population 62 and over 1970	_____
3. Percent elderly 1970: line 2 ÷ line 1	_____
4. Percent all persons income less than poverty level (Table 124)	_____
5. Number of persons, income less than poverty line 4 x line 1	_____
6. Percent elderly, income less than poverty (65 and over) Table 124	_____
7. Number of elderly, income less than poverty line 6 x line 2	_____
8. Percent elderly less than poverty income of the total population less than poverty income line 7 ÷ line 5	_____

¹Note: Counties undertaking a Level 4 base data analysis can derive median income for elderly in 1970 and the number of households below 80% and 50% of median income. Counties completing Level 2 and 3 can determine the number of elderly households in 1970 below 80% and 50% of overall median income by repeating the process described in the low income update section using the method on page 106, Chapter III.

²This table can be disaggregated for Negro and Spanish Language replacing data in Census Table 124 with comparable data from Tables 128 and 133, respectively.

Sources: Census of Population: 1970, Vol. 1, Characteristics of the Population, Illinois. Table 124 (15-753), Table 35 (15-257). See also footnote 2 on this page.

relative to the buying power of the median households, and the 1970 percent of elderly households with income below poverty levels is median to high, chances are very good that many of the elderly with housing needs in 1970 still have these or even greater needs today. Moreover, other elderly households may have acquired housing needs in the interim. Further disaggregation and analysis by inference is possible by looking at the percent of low income elderly by tenure (Tables 1 and 2, Level 2, Chapter II and Table 1, Level 3, Chapter II) and the trend in housing costs to buying power by tenure.

Further Tests with the 1970 Census Data on Elderly. If all previous updates show that the 1970 census data are still representative of the elderly population, or at least useful as a conservative estimate of their housing and related social service needs, three additional measures using only 1970 Census data may be analyzed to pinpoint specialized elderly housing needs. Table 23 shows these three measures. A high proportion of very old elderly households (e.g., over 40% of all elderly households 62 and over are aged 75 or over) would indicate an elderly population with a higher than average probability of functional impairments and, thus, a need for specially designed housing and/or supportive services. Rural elderly present a special problem in that their residences are spread throughout the country, making visiting support services to their homes costly and inefficient in emergencies (some counties are 100% rural). A high proportion of single person households (over 50%) may suggest a high proportion of elderly who, because they live alone, may create a higher than normal demand for visiting support services either as chronic disabilities worsen or during temporary illnesses (e.g., a broken leg or bad case of the flu).

The Total Care Elderly. Table 37 of the 1970 Census of Population for Illinois shows the number of elderly in total care institutions. This number can be updated by calling the county Office of Public Health which licenses nursing homes. Public Health officials can often give a quality evaluation and vacancy rate (or waiting list) for all nursing homes in the county.

Table 23. Additional Indicators of Elderly Housing and Support Service Needs

- A. High Proportion of Very Old. (Table 35)
 1. Add together all elderly 75 and above _____
 2. Divide by the total elderly 62 years and over _____
- B. High Proportion Rural Elderly. (Table 38)
 1. All in rural households 65 years and over
 - a. Head of family _____
 - b. Primary individual _____
 - c. Total rural households over 65 (a + b) _____
 2. All households 65 years and over (Table 38) _____
 3. Divide total in B (1.c) by B (2) to get percent rural _____
- C. High Proportion Single Person Households. (Table 37)
 1. Primary individuals 65 years and over
 - a. Male _____
 - b. Female _____
 - c. Total _____
 2. Divide total in C (1.c) by line B (2) above to get percent single person elderly households _____

Source: Census of Population: 1970, Vol. 1, Characteristics of the Population, Illinois, Tables 35, 36, 37, 38.

How to interrelate the update components. This section illustrates how the Level 1 update components can be interrelated to summarize overall housing market trends, to answer specific planning questions, and to check for primary and secondary errors in data assemblage and use.

HOUSING MARKET SUMMARY TABLES. Housing supply and housing demand components all measure the overall housing market, but each does so in a slightly different manner. Ideally, supply components should show how many housing units are available, at what costs, and in what types of structures. Demand components should show how many households want new or different housing units, the types of units that these households are willing to pay for or able to afford, and the kinds of living arrangements desired. After the analyst has updated all of the individual components, he/she should be able to match up total supply with total demand, allowing enough vacant units to enable households to move relatively freely within the housing market whenever they choose to or must change residences. By comparing total supply and total demand, the analyst has a measure of market equilibrium or imbalance. However, because an apparent imbalance may actually be the result of data inaccuracies, matching total supply and demand also becomes an overall check on the data themselves.

Table 24 shows how to match up supply and demand data. The data referred to in this example are aggregated totals for all of the major supply and demand components.

INTERPRETATION OF THE SUMMARY TABLE. (Table 24) If the total number of vacant units reflects a desirable vacancy rate for the county, then either the Series I or II running demand totals in line (12) should be within 10% of the running supply total in line (10), (i.e., line (12)-line (10)/line (10) or line (10)-line (12)/line (12) should be less than or equal to 0.10). Normally a vacancy rate of 4.0% to 6.0% in rental housing and 1.0% to 3.0% in owner occupied housing is considered "healthy."

If supply is greater than demand, a housing surplus exists.¹ If, in addition, the vacancy rate is too high, the surplus is even greater. If the vacancy rate is too low, the surplus is not as great as it initially appeared. If the demand is greater than the supply, a housing shortage exists. If, in addition, the vacancy rate is low, the shortage is worse than it initially appeared. If, instead, the vacancy rate is too high, the shortage is not as great as first indicated. One explanation of a simultaneously high overall vacancy rate and an overall housing shortage is that the vacancies that do exist may be concentrated in one location, price range, housing type, and/or tenure status while all other submarkets are experiencing housing shortages. In this instance, greater disaggregation of the data to submarkets such as owner-renter or urban-rural would then be required. (See below for further discussion.)

The reader will note that in this formulation as much as a 10% gap in matching demand and supply is considered acceptable. If the reader goes back and closely examines the data sources of the major update components, he/she will see, as

¹For the moment, data errors are assumed to be minimal. Data problems will be discussed below.

we did, the potential for error in the population projection assumptions, the slack in data definitions (e.g., assuming building permits are actual housing starts), the differences in the time periods within which data are collected, and so on. Any of these factors could cause some understandable gap in the supply/demand match-up. Therefore, so long as the overall trends in the total supply and demand lie within the limits set forth above, the analyst can fairly safely assume that the data are correct and that the market trends observed can be used for planning purposes.

If the match-up is not at all close, the analyst should look first for secondary data collection errors and then for primary data collection errors. Secondary data collection errors are errors in the analyst's own transferring, recording, or sampling of data, or they may even be arithmetic errors in this final table or earlier tables. A primary error is an error in data assembly or estimating by the agency that initially collected the data. These are much harder to check and correct. The three types of errors most likely to occur are:

1. Postal vacancy survey errors
2. Housing permits to housing starts errors
3. Population and/or household projection errors

If only a postal vacancy survey was used to estimate vacancies, rental or rural vacancies could easily have been undercounted. A landlord phone survey or rural windshield survey may be necessary to check the postal vacancy survey results.

If only permits were used to estimate additions to the housing stock, and supply far exceeds demand, a windshield survey of just the major growth areas in the county should enable the analyst to determine if building permits and incomplete starts far exceed the stock that is newly completed and ready for occupancy.

The single place where the greatest error could occur is in the State's population estimates. We found these estimates to be highly inaccurate in three of our original test counties. If the analyst knows from double checking that the data on starts and vacancies are basically correct, then he/she should consult the Bureau of the Census, Current Population Reports, Series P-26 for the update year in his/her county. This report updates only the county's total population (and therefore is not used in the population component), but this figure is sufficient as an alternative estimate to check the overall supply/demand match-up. This estimate provided a much more accurate supply/demand match-up in two of the three test counties mentioned above. In general, if a county has had a marked in-migration or out-migration of jobs in the last three years, or is within the travel radius of another county with rapid in-migration or out-migration of jobs, or is a one-industry county that has experienced a big gain or loss in employment, the Bureau of the Budget population estimates may have under- or overestimated the county's rate of growth. (For further discussion, see Appendix D.)

It should be obvious from the above discussions that aggregate analysis like that in Table 24 can and should be done for every submarket for which update data exist. (The urban/rural analysis is the obvious first market disaggregation.) Even where submarket update data are not available for every component, the analyst can trace submarket trends once the overall supply/demand picture has been established.

Table 24. Supply-Demand Match-Up for Aggregated Totals.

Supply Side Update (running total)

- 1) Start with the total housing units in 1970.
(Table 7, Level 2 of the base analysis, Chapter II) _____
- 2) Add the total conventional housing starts from 1970 to the
update year. (Table 10, Chapter III) _____
- 3) Add the total mobile home additions from 1970 to the update year.
(Table 12, Chapter III) _____
- 4) Add the total public housing additions from 1970 to the update
year. _____
- 5) Add the total group quarters additions from 1970 to the update
year. (Table 14, Chapter III) _____
- 6) Add all conversions from 1970 to the update year that resulted
in additional housing units. Do not add conversions that
resulted in a shift of residential housing type (e.g., conversion
from an owned to a rental unit). (Table 16, Chapter III) _____
- 7) Subtract all conversions from 1970 to the update year that
converted a residential unit to a nonresidential use. _____
- 8) Subtract all demolitions from 1970 to the update year including
public and private demolitions, losses from "natural disaster",
and "all other." (Table 16, Chapter III) _____
- 9) Subtract all mergers from 1970 to the update year that reduced
the housing units of two or more to one or less. (Table 16,
Chapter III) _____
- Total Updated Supply _____
- 10) Subtract total vacant units as of the update year. (Table 17,
Chapter III) _____
- Preliminary Adjusted Updated Supply

Demand Side Update (running total)

- 11) Start with the total households in 1970. (Table 3, Level 2
of the base analysis, Chapter II) _____
- 12) Add or subtract the change in total households Series I and
Series II. (Table 2, Chapter III)

Series I

Series II

One typical question that the housing analyst might ask of this housing market update is how well the private market provides new, low-income housing. Low-income households generally cannot afford new housing, but they can get better housing as it filters down from the new housing stock. A combined analysis of the shortage or surplus in the rental market along with cost trends of new rental housing relative to median income (or effective buying income) since 1970 could be revealing. If the gap between the cost of new rental housing and median income is widening each year, the gap between the point when new housing enters the market and when it begins to filter down to where low income households can afford to rent is also widening. The wider that gap, even with a new construction surplus, the less likelihood of housing filtering down to lower income households.

There is no easy way to check cost-of-housing with cost-of-living data. Upon comparing 1970 to 1975, some analysts may find that there has been very little change in relative housing costs between these two years, perhaps even a slight decline. Given the 1974-75 housing recession, the analyst might assume there is an error in the data. It must be kept in mind, however, that there was also a housing recession in early 1970 which in some areas was as bad as the recession that existed at the start of 1975. Using 1971-72 as a base point, the recent trend in housing costs has in most places been on the rise.

In this section and throughout the update chapter, we have tried to give the local analyst some ideas about how the update components can be used and inter-related to gain new insights into local housing trends. While some analysts may feel that we have often done this in a roundabout way by pointing out many of the weaknesses in the data, we believe that only by knowing the limitations of the data can an analyst intelligently use them to their full potential.

In keeping with this theme, the analyst is again reminded that many submarkets could not be analyzed because of the limitations of available secondary data sources. The absence of some data could mask submarket trends, particularly trends in household submarkets as defined by income, race, and family size, among other characteristics. The next section in this chapter describes work in progress on a second level of update analysis that is designed to uncover a more accurate and comprehensive generation of secondary data sources.

Level 2 Update Analysis

The Level 2 update analysis uses the same housing update model as does Level 1. The difference between the two levels lies in the replacement of Level 1 data sources and additions to Level 1 data sources with alternative secondary data sources that are more reliable, more comprehensive, and easier to use on a regular basis. However, while holding the promise of more reliable and easier housing updates, these alternative secondary data sources also impart a higher initial cost in terms of the time and/or money necessary to assemble them. These higher costs can be justified by a longer range commitment to regular housing update analyses by both the State and local governments.

In the hope that such a commitment is forthcoming, research is underway by the authors and sponsors of this handbook to evaluate alternative secondary data and to ascertain what effort must be made by State and local agencies to obtain these data. At the local level, negotiations are in progress with local governments and private agencies to make their data available in certain useful formats and/or to collect additional pieces of information as part of their current portfolio. At the State level, data can be assembled from State, federal, and private agencies that are useful to all counties. In addition to conducting negotiations similar to those undertaken at the local level, the State will have to store these data in a central data bank for dissemination to local analysts.

The following subsections highlight the research to date for the update components listed in Level 1.

Population and household projections. The State Bureau of the Budget (BOB) estimates of population change include an economic base analysis of changes in the number and types of jobs available locally.

The Bureau of the Budget estimates currently used in the Level 1 update analysis disaggregate the population by age cohort. The Bureau population estimates are also disaggregated by sex. This is an important variable in predicting elderly housing needs by functional disability and, as research into elderly housing expands, this information should prove useful in housing updates.

Two additional levels of population disaggregation are possible or will soon be made available from the Bureau of the Budget:

- 1) BOB and the Governor's Office of Manpower and Human Development recently published occupational manpower projections for the State and 20 multi-county regions of the State. Where these regions fit county and regional planning agency boundaries they may prove useful for estimating "expected to reside" components of housing assistance plan applications as part of an overall regional housing needs analysis. While the "expected to reside" component is not now a part of this handbook, work in this direction is being considered by DLGA.
- 2) The present BOB population estimation technique includes an estimate of county population migration by age and sex cohorts that is not separately published. As a result, the Level 1 update

analysis must attempt to extract the migration component from the published BOB population projections. It would be better and more accurate to receive the migration estimates directly. If the BOB sees a need and demand for such data at the local planning level we are confident they can and will make it available.

Another possible means of projecting population changes overall (as a check on the BOB method), and perhaps even by race and household size, involves school enrollment and motor vehicle licenses. Both sources of data show yearly population changes in a specialized subgroup of the total population. Because these are "biased" samples of the total population, statistical tests and models to estimate changes in the total population from such data must be developed before they can "safely" and easily be used in local housing demand updates. School data are available at several levels of household submarket disaggregation and by school district. School districts often coincide with municipal and county boundaries but not always. Some extrapolation and estimating may be necessary. Motor vehicle registrations are not currently summarized in a format useful for local planning purposes, but again, if the demand were there, it could encourage the development of usable yearly summaries at the county level.

The changing cost of housing. A comparative update data source to Sales Management Magazine's "Estimate of Buying Income" would greatly improve the update portion of the handbook. Since most of these estimates of income or buying power are based on small and often specialized submarket samples, alternative sources can help verify a trend of estimate. This fall, BOB is planning to publish a set of estimates which could serve as such an alternative. These are estimates of household income by size and type of household for each Illinois county. These data should be incorporated into the update portion of the handbook and be made available to local analysts as soon as they become available.

The possibility of creating yearly median and average income estimates, by county, from State income tax data has also been examined, and these estimates could serve as yet another alternative to Sales Management Magazine's "Estimated Buying Income." With both yearly average and median income, the analyst could trace changes in the distribution of the county's wealth as well as the overall change in median income.

We are also investigating the possibility of making available savings and loan association, Federal Housing Administration (FHA), and Veterans Administration (VA) data, at the county level, on average mortgages and interest rates (as well as with respect to variables describing the houses financed each year).

In addition, through negotiations with local utility companies, local analysts may be able to obtain yearly changes in utility costs for "typical" houses at various value levels. When traced over time, these data can provide another important indicator of changing housing costs.

Housing starts. In some counties, a request by the local analyst of building permit and property assessment offices to record all the data they are authorized to collect will greatly enhance the accuracy of the Level 1 analysis. If the local planner can show these agencies how their data will be useful for housing

planning, the agencies may be willing to adjust data formats so that they are more useful to the analyst and perhaps even to add a critical variable (such as tenure which currently is absent from much of the county data on housing starts).

In many predominantly rural counties, the Farmers Home Administration makes as many as 95% of the housing loans for new construction and repairs, and FmHA also makes a large portion of the loans in rural sections of counties with urban centers. Their data for each year from 1970 to 1975 (see Level 1 update dealing with housing starts for description) have recently been made available to the Department of Local Government Affairs. DLGA can now create summary tables from the FmHA data tapes by county over time. Local analysts will be able to develop as comprehensive a yearly picture of housing starts in rural areas in non-census years as was only available previously in census years. Similar data also may be available in the future from the Federal Housing Administration, Veterans Administration, and savings and loans.

Finally, our research has shown that water utility hook-ups are a good measure of housing starts in that they circumvent one of the major problems associated with building permit data, i.e., counting of permits that never result in construction. Water hook-ups usually indicate that the unit is near completion and ready for occupancy.

Demolitions, conversions, and mergers. Very little data are available here. Again, if county and local agencies can be shown their usefulness, data that might be made available but are not now recorded could be tabulated. Of particular interest is whether the demolished or converted unit was a standard or substandard unit, occupied or unoccupied, and, if occupied by a household which was, as a result, displaced, some of their household characteristics.

Vacancies. Utility companies, mentioned above as a source of housing cost data, can also provide "turn-on" and "turn-off" information on electrical or gas service which can be extremely useful in analyzing housing vacancies. Ideally, an analyst would record a unit as vacant on the date that electrical service is shut off and would assume the unit was vacant until service was restored. This method not only provides an ongoing analysis of vacancies (often by subarea of the county), but it also shows how often units become vacant in a subarea and the duration of these vacancies allowing the calculation of turnover rates and measurement of turnover time.¹

Utility data are virtually inaccessible for short range planning analyses. Where utility companies have released data, they have been shown through long negotiations with the analyst how they also can benefit from the analyst's proposed data program. For example, information with respect to the concentration and growth of customer service needs by location, is of interest to

¹A turnover rate is the number of moves per total households in an area. Turnover time is the length of time a vacant unit stays on the market. These measures can be used to monitor a neighborhood's economic "attractiveness" and stability.

utility officials and can be derived from the data released. In most cases, companies which have released data have been large enterprises whose billing systems were already computerized so that the analyst's program could fit into an ongoing operation. Moreover, in addition to providing the computer program, the analyst usually has been required to demonstrate that a built-in protection of customer privacy is guaranteed in his programming and analysis.

In counties where there are a number of gas and electric companies but none which is representative of all the different households in the county, negotiating with several utility companies can be so time-consuming that this alternative should not be considered. Even once the utility company's agreement has been secured, the analysis is not problem-free. Measurement problems created by multifamily rental units with only one utility meter (so-called "master-metered" buildings), by non-payment of utility bills resulting in forced shut-offs that, if not caught by the computer program, become "phantom" vacancies, and by movement of families that never result in a utility shut-off can arise. However, these latter problems are usually small and can be overcome (or at least isolated) in most counties.

Low income and elderly submarkets. Low income updates can be improved by supplementing Sales Management Magazine data with annual State Internal Revenue data on median income. As the reader will recall, the HUD method of estimating numbers of lower and very low income households utilized 80% and 50% of median income measures. Since the coverage of State income tax data is limited to those who actually pay taxes, it may produce a different estimate of median income than that which would be determined if the total population were counted or by Sales Management Magazine's procedures. Nonetheless, if the Internal Revenue data are collected over several years and a trend line produced, they can still become a useful comparative tool.

Next year State Internal Revenue data will begin to disaggregate all elderly and disabled taxpayers so that median incomes and housing tenure data can be created, by county, directly for these groups.

The Department of Revenue also has a data set on participants in the "circuit breaker" program designed to relieve the tax burden on the elderly and the disabled. At present, the data are disaggregated by tenure (owner v. renter) and are available for counties and municipalities. Here again, there is a problem of undercounting since not everyone eligible participates in the program. The data should be used and interpreted carefully. Since virtually no requests for these data have been made before by DLGA or any other state or local agency for planning purposes, it is not now being summarized and published by county, but a shift in policy and funds for developing the summaries could be forthcoming if the demand and need were shown.

Our research into the Illinois Department of Public Aid's newly created Client Information System (CIS) has revealed that it is an excellent source of update data on a large portion of the low income and elderly population in the State. Many important housing and household variables are recorded and a number of useful tables can be generated from the CIS tapes. Since state and federal participant programs with local governments involve low-income needs, and eligibility for the programs stresses proof of local low-income needs, the development of county public aid data tables and their incorporation into the analysis should be a high priority item.

Elderly updates also can be improved. In addition to utilizing population estimates by sex and age as mentioned above, the possibility of making available on an annual basis and by county, the percentage of the elderly population receiving Supplemental Security Income (S.S.I.) and the median S.S.I. income is being explored. In this regard, data from the Illinois Department of Public Aid Client Information System's data exchange with the Federal Social Security Administration is being examined. Briefly, by comparing 1970 median Social Security income with estimates of elderly median income derived from the fixed tables in Levels 2 and 3 of the base data analysis in this Handbook, the analyst can observe the degree of the elderly's dependency on Social Security income in 1970. If Social Security is a major source of income for the majority of elderly, the analyst can trace these payments over time and compare them with national rates of inflation and local rates of increase in housing costs. Where Social Security and S.S.I. are smaller sources of the elderly's income, it will be necessary for the local analyst to look at employment data for persons over 62, and to examine local pension data sources. For the wealthier elderly, investments may contribute substantially to their total income. While these elderly are less likely to suffer housing needs, the analyst might want to assume that income in excess of Social Security and pensions in 1970 was derived from interest on a moderate investment such as a savings account, and then trace dividends being paid today for a comparable investment to see if these have kept pace with inflation.

State motor vehicle data are also being analyzed as one measure of elderly mobility by sex and age.

Nevertheless, the major improvement in elderly housing needs still promises to be the separate elderly housing and support services model now being developed. (See description under Level 1.) That model will measure elderly housing needs in the light of the functional independence of the elderly population and their need for supportive services.

Level 3 Update Analysis

Level 3 update analysis was described in Chapter I of the Handbook as showing how to collect primary housing update data at the local level. While this still remains a long range goal, it is not being funded at this time. Expansion of the housing analysis technique to the municipal level and the development of other housing analysis components such as "expected to reside" estimates are of equal importance but research in these areas is being explored.

APPENDIX A

Review of the Federal Housing Assistance Plan, and 701 Housing Element Application Forms and Regulations in Relation to the Housing Needs Analysis Methodology Presented in this Handbook

Federal Requirements for Housing Plans

The Housing Needs Analysis Handbook is designed, in part, to help local officials, especially at the county level, meet federal housing planning requirements. A handy application of this Handbook is in the preparation of the comprehensive "701 Housing Element. An important segment of the Housing Element requires participating areawide and local planning organizations to "identify the housing needs of the current and prospective population by appropriate geographic sectors and provide for the distribution of housing resources." The Handbook aids this planning effort by identifying data sources and suggesting critical variables within the framework of a realistic housing model. The entire Handbook should be useful in this regard. It is necessary, however, to note the limitations of the Handbook for 701 planning. First, no attempt is made to provide a "fair share" model for the allocation of resources, although the enumeration of housing needs might be one component of such a model. The issues involved in allocation planning do not lend themselves to standardized data analysis models but rather require a program and policy alternative model that describes the key variables, issues, and planning alternatives. DLGA is strongly considering expanding the Handbook to include such a model. Second, no attempt has been made to apply the existing county level model to the subarea or census tract level of analysis. However, as part of the main analysis under way, we anticipate that the Handbook will be expanded by Fall, 1976 to include analysis by census tract, in municipalities, wherever possible. Finally, the Handbook does not endeavor to project future housing needs. However, the current model may become a predictive model, once it is fully implemented and regularly updated, by means of extrapolating past trends as soon as such trend lines are established.¹

A second application of the Handbook is in the preparation of Housing Assistance Plans (HAPs) required in conjunction with applications for Community Development Block Grants. The latest HAP forms and regulations consist of four parts:² (1) a survey of housing conditions, (2) an estimate of the housing assistance needs of lower income households, (3) a statement of housing assistance goals, and (4) an indication of the general location of proposed new construction and rehabilitation projects.

¹For more detailed discussion of projecting future housing needs, see Monitoring Housing Needs in Illinois: An Ongoing Housing Market Analysis Model. Urbana: Housing Research and Development, University of Illinois, pp. 152-154.

²U.S. Department of HUD: Part 570 - Community Development Block Grants: Housing Assistance Plans, Federal Register Vol. 41 #34, pp. 7503-7506, 2/19/76. HAP General Instruction Form # HUD: 7015.8-11, as of 3/76.

Survey of Housing Conditions

Table I of the HAP requires a survey of housing structural conditions (see p. 130, Table I). The purpose of this table is to identify occupied and vacant units by tenure and by whether the unit is standard, substandard, or suitable for rehabilitation. In addition, the table requires the calculation of an overall vacancy rate, specified as to tenure and suitability for rehabilitation. The definition of "substandard" units depends on local standards. Among the criteria suggested by HUD are (1) the lack of some or all plumbing facilities, (2) units in dilapidated condition based on 1960 census data, (3) significant violations of local housing codes, and (4) housing quality standards as set forth in the regulations for the Section 8 existing housing program.

The lack of some or all plumbing facilities is a measure of need used in all four data levels in the Handbook. However, at Level 1, the special HUD tabulation, units with inadequate plumbing facilities are inseparable from other measures of need. Two of these measures, overcrowding and excessive rent, are characteristics of households rather than structures and therefore should not be counted in HAP Table I. The second technique, determining dilapidated conditions by extrapolation from 1960 census data, is not presented in the Handbook and is not recommended. The well-known inaccuracy of the 1960 data and the probability that the correlation of plumbing conditions with measures of dilapidation has changed since 1960 make this method unreliable. The third technique, based on significant violations of local housing codes, is perhaps the best indicator of "local standards." It is not suggested in this Handbook only because of the time and other resource limitations faced by the majority of local agencies that might consider a major inspection program. However, detailed research over the last six months on all possible census variables shows that such measures are very poor indicators of deteriorating conditions as found in the more complete and detailed local windshield surveys or inspections. The fourth method suggested by HUD refers to a wide variety of housing quality standards which represent performance requirements for the Section 8 Existing Housing program.¹ Several of these quality measures can be estimated using census data. The availability of all plumbing facilities discussed above satisfies the requirement for "sanitary facilities." The existence of complete kitchen facilities is the acceptability criterion for "food preparation" and the presence of adequate heating equipment indicates an appropriate "thermal environment" (the census categories "not heated;" "fireplace, stove, or portable room heater;" and "room heater without flue" usually fail to meet Section 8 standards). Both the kitchen and heating data are available in Level 4 of the base data analysis in this Handbook. Data on heating are also available in Level 2 of the Handbook, but it isn't possible to eliminate overlaps with other need measures at that level. Note, however, that Section 8 quality standards require that plumbing, kitchen, and heating equipment be in proper operating condition. Census data require only the presence of equipment and therefore tend to underestimate substandardness. In addition to the criteria suggested by HUD, local officials may also want to consider the age/value variable found in Levels 3 and 4 of this Handbook. Unfortunately, this measure is available only for owner-occupied units.

¹The standards for 1975 are published in 24 CFR (Code of Federal Regulations), part 1275, 103.

As in the case of substandard units, the definition of units "suitable for rehabilitation" is a matter of local judgment. Such units may be either standard or substandard. Two sets of standards exist for determining the feasibility of a unit for rehabilitation. The first set refers to existing economic conditions such as rehabilitation cost, market acceptance, and available construction and financing resources. Measurement of these conditions is clearly beyond the scope of both the Census Data Base Analysis and the Level 1 Update Analysis presented in this Handbook. The second set of standards refers to housing unit conditions. All of the inadequacies of the substandardness variables noted earlier are now compounded by the need to identify variables which both measure "marginal" standardness or substandardness and serve as reliable indicators of physical conditions suitable for repair or replacement. Existing census data is not suitable for these purposes nor is any other form of secondary data. Note that data on units suitable for rehabilitation is only mandatory for applicants proposing housing rehabilitation goals in HAP Table III. Since primary surveys would be necessary to complete Table III, and would involve costly individual building and neighborhood inspections, the local analyst might want to first identify need for housing rehabilitation programs using Table 17, p. 49 of the Level 2 Base Analysis, and repeating it where possible on a census tract or subarea level; then concentrate the inspection survey on the most suitable tracts or neighborhoods. The expansion of Table 17 would involve only rehabilitation projects in owner-occupied neighborhoods.

Data on the total number of occupied and vacant units by tenure are available on Levels 2-4. These figures can be updated using the Update sections of the Handbook entitled "Additions to the Housing Stock," "Demolitions, Conversions, Mergers, and Other Losses to the Housing Stock," and "Vacancies."

Housing Assistance Needs of Lower Income Households

Table II of the HAP requires the computation of the housing needs of owner and renter lower income households, each classified as "all households," "female-headed households," and/or "minority households." Each of these groups is further subdivided into small family, large family, and elderly or handicapped families. Sources of lower income housing need fall into three categories: currently requiring assistance, households expected to be displaced, and additional households expected to reside in locality (see p. 131, Table II).

In counting households currently requiring assistance, consideration is required of families living in substandard (lacking some or all plumbing) or overcrowded units (1.01+ persons/room) along with families paying too much for their housing (renters paying 25% of their income for rent; owners in units built before 1940 and valued at less than \$10000 in SMSAs or \$7500 in non-SMSA areas). The HUD tape (Level 1) was developed for this purpose and meets the minimum requirement for this portion of HAP Table II. The HUD tape also has the decisive advantage of being available for many municipalities, allowing a comparable data base for HAPs at different jurisdictional levels. Level 1 data on municipalities is available from either DLGA or Housing Research and Development in the same format and at the same price as the county data from Level 1. However, users will note several problems with the HUD tape. First, overcrowding is measured at 1.25+ persons/room rather than the 1.01+ level recommended by HUD. Second, elderly households on the tape are those with any member over 62 years rather than those headed by a person over 62. Third, the HUD tape measure of excessive housing costs is the housing age/housing value variable. In Levels 2 and 3, the Handbook recommends a household

income/housing value variable. Finally, the HUD tape does not disaggregate inadequate conditions for female-headed households.

Nearly all counties are expected to use Level 1 for this portion of the HAP. However, we highly recommend using the HUD tapes in the easier format we have re-programmed for this Handbook. In addition, we recommend that local agencies use Levels 2-4 to disaggregate and extend the analysis of inadequate conditions, where possible. Data on the housing needs of female-headed households is only available in Level 4. However, our research suggests that this category is a major problem group only in the largest counties, which also have Level 4 available to them. The Handbook makes no suggestions for updating these measures of housing need.

The second source of housing need includes households displaced or expected to be displaced by public or private action. Implementation of the "Demolitions, Conversions, and Mergers" portion of the Update section of the Handbook should provide totals and trend lines sufficient to meet this data requirement.

The final source of local household need includes current non-residents who are "expected to reside" in the locality due to planned employment growth or due to their existing status as in-commuters (an areawide or state need assessment or "fair share" plan which takes into account in-commuters may be substituted for this latter estimate). At this point the Handbook does not address the "expected to reside" portion of housing needs. However, the Update section on new household formation may assist the estimation of household growth due to planned employment, particularly if used in conjunction with employer surveys and inspection of existing zoning regulations. As noted earlier, DLGA is strongly considering expanding the Handbook to include "expected to reside" and "fair share" modelling in order to aid local analysts at municipal, county, and regional levels faced with these requirements.

Goals for Lower Income Housing Assistance

HAP Table III requires applicants to specify one and three year goals for housing assistance, specified as to household type (small family, large family, and elderly/handicapped) and program category (new rental, rehabilitated rental, existing rental, new owner-occupied, and owner-occupied rehabilitated units) and type, e.g., Section 8, Section 235, etc. (see p. 132, Table III).

Goals for both household types and program categories must be consistent with the need assessments in Tables I and II. For instance, among the indicators of need for a new construction program would be a low vacancy rate from Table I and a large influx of households expected to reside from Table II. However, in general the minimum requirements for Tables I and II are not likely to be sufficient to specify goals for program category or type. For example, the aggregation of households with excessive housing costs with other need measures "hides" an important indicator of the need for assistance to renters in existing units. For this reason, and in the interest of a more professional report which might be more influential with HUD, greater sub-market disaggregation is suggested. This would include using and implementing Levels 1, 2, and update for small counties; Levels 1-3 and update for medium sized counties; and Levels 1-4 plus Update for the largest counties as described in the text addressing diagrams 1-3 in the Introduction to the Handbook.

General Locations for Proposed Lower Income Housing

The fourth section of the HAP requires applicants to identify the general location, by census tracts or groups of census tracts, of proposed new construction and rehabilitation projects. Identification of appropriate neighborhoods in order to avoid concentration of minority and low-income households may be carried out on the basis of local planners' acquaintance with the area. Continued research on development of a municipal analysis technique similar to the county technique presented here should be helpful in this respect, since it will operate on tract or enumeration district levels. This should be completed early in 1977.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

HOUSING ASSISTANCE PLAN - TABLE 1. SURVEY OF HOUSING CONDITIONS

A. HOUSING STATUS AND CONDITION OF ALL HOUSING UNITS IN THE COMMUNITY

NAME OF APPLICANT

3. ☐ ORIGINAL

☐ AMENDMENT, DATE:

5. DATE OF HOUSING SURVEY(S) USED

2. APPLICATION/GRANT NUMBER

B	-	-	-	-	-	-	-	-	-
---	---	---	---	---	---	---	---	---	---

4. PROGRAM YEAR

FROM

TO:

NUMBER OF HOUSING UNITS

STATUS AND CONDITION OF ALL HOUSING UNITS	YEAR OF ESTIMATE	ALL UNITS				OWNER		RENTER	
		TOTAL	SUBTOTAL SUITABLE FOR REHABILITATION*	TOTAL	SUBTOTAL SUITABLE FOR REHABILITATION*	TOTAL	SUBTOTAL SUITABLE FOR REHABILITATION*	TOTAL	SUBTOTAL SUITABLE FOR REHABILITATION*
(a)		(b)	(c)	(d)	(e)	(f)	(g)		
1. Occupied Units - Total									
a. Substandard									
b. Standard and All Other (line 1 minus line 1a)									
2. Vacant Available Units - Total									
a. Substandard									
b. Standard and All Other (line 2 minus line 2a)									
3. Housing Stock Available - Total (sum of lines 1 and 2)									
4. Vacancy Rate (line 2 ÷ 3)									

* "Suitable for Rehabilitation" must be included as a subtotal if the applicant is proposing a rehabilitation program on Table III, Goals for Lower Income Housing Assistance.

B. DEFINITIONS, DATA SOURCES, AND METHODS (Attach additional pages)

1. Definition of "substandard" used.
2. Definition of "suitable for rehabilitation" used.
3. Data sources and methods used.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
HOUSING ASSISTANCE PLAN
TABLE III. GOALS FOR LOWER INCOME HOUSING ASSISTANCE
CURRENT YEAR GOAL

1. NAME OF APPLICANT (IDENTICAL TABLE EXISTS FOR THREE-YEAR GOAL)		3. ORIGINAL <input type="checkbox"/> AMENDMENT, DATE:		
2. APPLICATION/GRANT NUMBER <div style="border: 1px solid black; padding: 2px; display: flex; gap: 5px;"> B - - - - </div>		4. PROGRAM YEAR FROM TO		

TYPES AND SOURCES OF ASSISTANCE	NUMBER OF HOUSEHOLDS TO BE ASSISTED				
	ALL HOUSEHOLDS	ELDERLY OR HANDICAPPED (1-2 persons)	FAMILY (4 or less persons)	LARGE FAMILY (5 or more persons)	
(a)	(b)	(c)	(d)	(e)	
A. NEW RENTAL UNITS					
1. Section 8-HUD					
2. State Agency-Total (Sum of lines a and b)					
a. Section 8					
b. Other					
3. Other Assisted New Rental Housing (Identify) - Total					
a.					
b.					
4. Total (Sum of lines 1, 2, and 3)					
B. REHABILITATION OF RENTAL UNITS					
1. Section 8-HUD					
2. State Agency-Total (Sum of lines a and b)					
a. Section 8					
b. Other					
3. Other Assisted Rehabilitation of Rental Housing (Identify) - Total					
a.					
b.					
4. Total (Sum of lines 1, 2, and 3)					
C. EXISTING RENTAL UNITS					
1. Section 8-HUD					
2. State Agency-Total (Sum of lines a and b)					
a. Section 8					
b. Other					
3. Other Assisted Existing Rental Housing (Identify) - Total					
a.					
b.					
4. Total (Sum of lines 1, 2, and 3)					
D. REHABILITATION ASSISTANCE TO HOMEOWNERS OR PROSPECTIVE HOMEOWNERS					
1. CD Block Grants					
2. Section 235					
3. Other Rehabilitation Assistance to Homeowners or Prospective Homeowners (Identify) - Total					
a.					
b.					
4. Total (Sum of lines 1, 2, and 3)					
E. NEW CONSTRUCTION ASSISTANCE TO HOMEOWNERS OR PROSPECTIVE HOMEOWNERS					
1. Section 235					
2. Other (Identify) - Total					
a.					
b.					
3. Total (Sum of lines 1 and 2)					
F. ALL HOUSING ASSISTANCE GOALS (Sum of lines A4, B4, C4, D4, and E3)					

Appendix B

CORRECTION FOR FIRST COUNT TABLE 30

Due to an error in the microfiche of Table 30 of the First Count data, the data presented in the table must be rearranged as follows:

Column 1, Rows 1-3 becomes Row 1

Column 1, Rows 4-6 becomes Row 2

Column 2, Rows 1-3 becomes Row 3

Column 2, Rows 4-6 becomes Row 4

Column 3, Rows 1-3 becomes Row 5

Column 3, Rows 4-6 becomes Row 6

In the table obtained after making these changes, there remains one error. The entry in Column 1, Row 6 (Negro renters in units with 1.00 or fewer persons per room) is incorrect. To obtain the correct entry, subtract the entry in Column 1, Row 5 from the entry in Column 1, Row 4.

Appendix C

Data Available from the Regional Library System in Illinois

During the first year of the handbook's use, it was discovered that not all libraries in the state have all First and Fourth Count data on file. Specifically, data for the following counties have been unavailable from certain libraries:

<u>Microfiche County Identification Number</u>	<u>County</u>
009	Brown
013	Calhoun
035	Cumberland
047	Edwards
059	Gallatin
069	Hardin
087	Johnson
151	Pope
153	Pulaski
155	Putnam
171	Scott
175	Stark

Data for all of these counties are available from the Reference Coordinator of the State Library in Springfield, Ms. Candace Morgan. She may be contacted at:

The Office of the Secretary of State
Illinois State Library
Springfield, Illinois 62756

In addition to the First and Fourth Count census data the state libraries also keep on file all regulations and application forms put out by the federal government and in particular the latest HUD regulations and forms necessary to complete 701 and Housing Assistance applications.

A list of the locations of regional libraries throughout the state is included below. When these libraries are unable to provide planners with the First and Fourth Count data and HUD forms which they require, the central State Library listed above will be able to.

Library Systems in Illinois

Bur Oak Library System
c/o Joliet Public Library
150 North Ottawa Street
Joliet, Illinois 60431
(Tel) 815-726-5394
Director: Mr. Charles De Young
President: Mrs. Mary Avalos

Chicago Library System
c/o Chicago Public Library
Central Library
78 East Washington Street
Chicago, Illinois 60602
(Tel) 312-269-2900
Director: Dr. Alex Ladenson
President: Mr. Ralph G. Newman

Corn Belt Library System
412 Eldorado Road
Bloomington, Illinois 61701
(Tel) 309-663-2211
Director: Mr. Henry Meisels
President: Mr. George Barford

Cumberland Trail Library System
12th and McCawley Streets
Flora, Illinois 62839
(Tel) 618-662-2741
Director: Mr. Glenn Dockins
President: Mr. Ray Farrar

Du Page Library System
127 South First Street
P.O. Box 268
Geneva, Illinois 60134
(Tel) 312-232-8457
Director: Miss Alice E. McKinley
President: Mr. Richard E. Wayman

Great River Library System
515 York Street
Quincy, Illinois 62301
(Tel) 217-223-2560
Director: Mr. Stillman Taylor
President: Dr. M.B. Wait

Illinois Valley Library System
c/o Peoria Public Library
107 Northeast Monroe Street
Peoria, Illinois 61602
(Tel) 309-672-8870
Director: Mr. Ray Howser
President: Mrs. Betty J. Simpson

Kaskaskia Library System
306 North Main Street
Smithton, Illinois 62285
(Tel) 618-235-4220
Director: Mr. Edgar W. Chamberlin
President: Mrs. Francis Maxwell

Lewis & Clark Library System
P.O. Box 368
Edwardsville, Illinois 62025
(Tel) 618-656-3216
Director: Mr. Jack Prilliman
President: Mr. Jerome Podesva

Lincoln Trail Library System
1704 West Interstate Drive
Box 3339 Country Fair Station
Champaign, Illinois 61820
(Tel) 217-352-0047
Director: Mr. Anthony Baldarotta
President: Mr. Carl Hudson

North Suburban Library System
5814 Dempster Street
Morton Grove, Illinois 60053
(Tel) 312-967-5400
Director: Mr. Robert McClarren
President: Mr. Seymour Nordenberg

Northern Illinois Library System
c/o Rockford Public Library
215 North Wyman Street
Rockford, Illinois 61101
(Tel) 815-965-6731
Director: Mr. Julius Chitwood
President: Mr. Don Urech

River Bend Library System
P.O. Box 125
Coal Valley, Illinois 61240
(Tel) 309-799-3131
Director: Mr. George A. Curtis
President: Mrs. Al Boyles

Rolling Prairie Library System
345 West Eldorado Street
Decatur, Illinois 62522
(Tel) 217-429-2586
Director: Mr. C. Ray Ewick
President: Mrs. Marjorie Roberts

Shawnee Library System
R.R. 2
Box 136A
Carterville, Illinois 62918
(Tel) 618-985-3711
Director: Mr. James Ubel
President: Mr. Carl Jones, Jr.

Starved Rock Library System
Hitt and Swanson Streets
Ottawa, Illinois 61350
(Tel) 815-434-7537
Director: Mrs. Mary T. Howe
President: Mr. William Stevenson

Suburban Library System
125 Tower Drive
Burr Ridge
P.O. Hinsdale, Illinois 60521
(Tel) 312-325-6640
Director: Mr. Lester Stoffel
President: Mr. Robert L. Sheets

Western Illinois Library System
58 Public Square
Monmouth, Illinois 61462
(Tel) 309-734-7141
Director: Miss Camille Radmacher
President: Mr. Donald Strand

APPENDIX D

Population Projection and Estimation

There are two methods of population projection and estimation currently available to local Illinois planning agencies. The two methods are 1) the Illinois Bureau of the Budget (BOB) population projection technique and 2) the U.S. Bureau of the Census P-26 series population estimate technique. Since the local analyst may want to use the BOB method or the P-26 method or both, it is helpful to understand the differences in the two techniques. It is important to remember that these techniques provide only projections in the first case and estimates in the second and are only as accurate as the underlying assumption in each technique.

The BOB projections rely on employment trends and past migration patterns while the P-26 estimates use the previous year's school enrollments and motor vehicle registration data. In a fast-growing county where most of the employment and housing are generated in the county, the two techniques are likely to be similar but the BOB method, which deals with population growth generated by employment opportunities, is likely to be more accurate than the school enrollment and motor vehicle data utilized by the P-26 estimates. School enrollment and motor vehicle registration lag behind the actual growth of the county and thus the P-26 method would underestimate the actual population. In fact, the most recent P-26 estimates are always for the previous year or earlier.

Since the BOB projection assumes residential development follows growth and employment in counties, the BOB projection technique will undercount county growth where residential growth supports employment in neighboring counties. In such a case, it may be more advisable to rely on the P-26 yearly population estimates which use variables that more directly reflect the residential growth in a given county. The local analyst may want to use the BOB population projections for the region and adjust the figure to the county's proportion using the P-26 estimation method. For the region, the BOB projections are more likely to be accurate since they include migration and economic trends for that economically self-contained region. An example of this method follows: Let's say an alternative 1976 population estimate is desired for a county for which there is both a BOB county and regional estimate. 1970 census base populations are also available for the counties and region. P-26 estimates can be summed from 1970-1975 and a trend projection of these yearly growth rates could give a 1976 estimate if one is not yet available. The total population growth from 1970 to 1976 by both the BOB and P-26 method can now be created for each county in the region. If the total regional growth rate is set equal to 100%, the percentage rate for each county can be derived. This percentage growth rate for each county using the P-26 series can then be applied to the total regional growth rate derived by BOB. With this method, the BOB population projections for the state by region will remain unchanged and the local agency is only questioning the distribution of the projected population within counties.

GLOSSARY

Affordable Housing - See "Excessive Housing Cost."

Age/Value - A measure of inadequate housing which assumes that, as of 1970, units built before 1939 are inadequate if they are valued at less than \$10000 (if located in an SMSA) or \$7500 (if located outside an SMSA). This measure is employed primarily in the HUD data.

Aggregation - The summing of smaller (component) parts into a larger unit. For example, county data can be aggregated into state data.

Appreciation - An increase in the value of a housing unit. A housing unit may appreciate in value due to general housing price increases (inflation), home improvements, or rehabilitation of the housing unit.

Base Data - A single data source which describes conditions existing at a date earlier than the date for which a housing analysis is desired. This source provides data in the same form which all planning units (e.g., counties) in the state can use to begin analysis and may then update by using a variety of local data sources. 1970 census data are the base data for this Handbook (see also: "Update Data").

Census, First Count - Data obtained in the 1970 Census from a complete survey (100% sample) of the population. First Count data are not published but are available on microfiche (film) or on special computer tapes. It is used in Level II of the Base Data Analysis in this Handbook (see also: "Census Sample Sizes").

Census, Fourth Count - Data obtained in the 1970 Census based on sample surveys of 5%, 15%, and 20% of the population. Fourth Count data are the most detailed data used in Level II of the Base Data Analysis section of this Handbook. Fourth Count data are available on microfiche (film) or on special computer tapes (see also: "Census Sample Sizes").

Census, Published Reports - Data obtained in the 1970 Census based on 5%, 15%, 20% (the 5% and 15% sample), and 100% sample surveys of the population. These data are available in published volumes in many planning offices and public libraries. Published data are used in Level II of the Base Data Analysis section of this Handbook (see also: "Census Sample Sizes").

Census Sample Sizes - The 1970 Census was collected from samples of three sizes: 5%, 15%, and 100% of the population. The larger the sample size, the more basic and less detailed are the data. All data collected in the 100% sample were collected in the 5% and 15% samples and all data collected in the 15% samples were collected in the 5% sample as well. Thus, a 20% sample, which is obtained by combining data from the 5% and 15% samples, is often presented in Census reports.

Clustering - See "Public Use Cluster."

Components - See "Update Components."

Congregate Housing - Housing in which various residents share eating, health, and living facilities and/or social settings. Congregate housing is becoming popular as a form of group residence for the functionally disabled elderly who need aid with daily living but not total nursing care.

Contract Rent - Monthly rental payments made by a household as specified in the contract (lease) which may or may not include utility costs, furnishings, etc. (see also: "Gross Rent" and "Utilities").

Conventional Housing Starts - See "Housing Starts."

Conversion - The creation of two or more housing units from fewer units through structural alteration (e.g., adding on to the unit or installing partitions) or by a change in use.

Crosstabulation - A method of presenting data which shows how the number of cases represented by a given variable are distributed when defined by one or more other variables. For example, when the age of the head of household is crosstabulated with housing tenure, we see the number of heads of households over 65 who own or rent (see also: "Matrix").

Crowding - See "Overcrowding."

Demand - The number of housing units which would be purchased or rented at various sales prices or rents if these units were made available. In housing analysis, "demand" and "effective demand" are considered to be the same thing. "Latent demand" consists of housing units which households would like to purchase or rent but cannot or do not because of various circumstances (e.g., the housing desired is not available, the household's income is too low to obtain the housing sought, etc.) (see also "Secondary Households").

Demolition - A housing unit which is torn down through the action of a public agency or the unit's owner.

Depreciation - The decrease in the value of a housing unit, usually due to either a deterioration in its condition or the condition of surrounding units (i.e., the neighborhood). The opposite of appreciation.

Deterioration - The process by which a housing unit in sound condition declines to the degree that its condition becomes substandard. A decrease in the quality of a housing unit. The 1960 Census provided an estimate of the number of deteriorating housing units but such an estimate was not attempted in 1970.

Dilapidated - A housing unit which is in such poor condition that it is unsafe to live in. As with deterioration, the 1960 Census provided an estimate of the number of dilapidated housing units. This was not done in the 1970 Census.

Disaggregate - To break down a larger unit into its smaller (component) parts. For example, "inadequate housing" could be disaggregated into units with inadequate plumbing, units which are too expensive for the occupants to

afford, and overcrowded units. The State of Illinois can be disaggregated into counties, municipalities, census tracts, blocks, and individual households, moving from larger to smaller (more detailed) levels of disaggregation.

Drive-by Survey - See "Windshield Survey."

EBI - See "Effective Buying Income."

Effective Buying Income - Net income available to a household, after taxes are taken out. This measure of household income is estimated by Sales Management Magazine and is used in Level I of the Update Data Analysis section of this Handbook as the operational definition of median household income in a county.

Effective Buying Power - For the purposes of this Handbook, this phrase is interchangeable with Effective Buying Income.

Effective Demand - See "Demand."

Effective Vacancy - A vacant unit which is of sufficient quality that it would provide adequate shelter. Thus, a dilapidated vacant unit would not be an effective vacancy (see also: "Frictional Vacancy" and "Vacancy").

Elderly - For the purposes of this Handbook, households are generally considered to be "elderly households" if the household head is aged 62 or older. Likewise, an individual over the age of 62 is considered to be elderly. In some cases, the age cutoff is changed to age 65. (See also: "Total Care Elderly.")

Eligibility Threshold - Income limits which define the income levels of "low-income" and "very low-income" households. As used in this Handbook, low-income households are those whose income is less than 80% of the median household income in an area; very low-income households are those whose income is less than 50% of the median household income in an area. These thresholds are defined in the 1974 Housing and Community Development Act and are often used to determine whether a household qualifies for governmental assistance (e.g., public housing).

Excessive Housing Cost - For renters, housing costs are said to be excessive if gross monthly rent exceeds 25% of gross monthly income. For owner occupants, housing costs are excessive if the housing unit costs more than 2.5 times the household's gross annual income. Both of these excessive housing cost ratios have more meaning the lower a household's income. Because wealthier households can "choose" to pay high ratios to fit their housing tastes, a ceiling is normally placed on the incomes to which cost ratios are applied. In 1970, \$15,000 to \$20,000.

Filtering - A (theoretical) process whereby units are passed on to lower income households after higher income households no longer wish to live in these units.

First Count Census - See "Census, First Count."

FmHA - The Farmer's Home Administration. A federal agency which provides housing assistance in rural areas. FmHA is part of the U.S. Department of Agriculture and not HUD.

Fourth Count Census - See "Census, Fourth Count."

Frictional Vacancy - Vacant housing units which, because they are vacant, allow consumers greater leeway in choosing a new residence. "Adequate" frictional vacancy rates to allow for consumer mobility are conventionally set at 1-3% for sales units and 4-6% for rental units (see also: "Effective Vacancy" and "Vacancy").

Gray Area - An area of a city or region which is in the process of declining, often marked by the beginning signs of deteriorating housing, poor city or public services, increased crime rates, etc. Gray areas are often referred to as "transitional areas," indicating a change from decent to substandard living conditions.

Gross Rent - Contract rent plus average monthly cost of utilities and fuels to the extent these are not included in the contract rent (see also: "Contract Rent" and "Utilities").

Group Quarters - Households which are made up of five or more persons unrelated to the head of the household or, when there is no household head, households of six or more unrelated persons are said to live in group quarters. Also included are persons living in institutions, dormitories, convents, military barracks, rooming houses, etc.

Headship Rates - The number of persons in the population divided by the number of heads of households (see also: "Household Head" and "Household Formation").

Household - A family, an individual, or a group of individuals who buy or rent a housing unit. For the purposes of this Handbook, we assume there is one household per housing unit. (This need not always be the case. See "Latent Demand" under the definition of "Demand.") Households create housing demand and have housing needs.

Household Characteristics - Characteristics of the persons who live in a housing unit, such as race, age, sex, and income. Often, household characteristics are measured in relation to the head of the household, such as "age of head." (See also: "Household.")

Household Formation - Household formation can be defined in two ways, first as the number of persons in a household and their relation to the head of the household. The second definition and the one used in this Handbook refers to the rate at which new households form and demand or need separate housing units. Because households are represented by the head of household, headship rates reflect household formation rates. Recently, in many counties, household formation has been increasing regardless of population increase apparently because former extended households made up of husband/wife plus parents, grandchildren, etc., are splitting up into several separate households each demanding or needing separate units.

Household Head - The person who is designated as the head of the household by household members, except that the Census always designates the husband as the household head - even if the wife is designated the head by family members. There are two types of household heads, "family heads" and "primary individuals." Family heads are household heads who live with one or more persons related by blood, marriage, or adoption. A primary individual either lives alone or with non-relatives only.

Household Submarket - See "Housing Submarket."

Household Type - A method of describing households which classifies them according to the sex, marital relationship, or relationship to the household head of the household members. Examples of household types include husband-wife families, other families with male heads, other families with female heads, and primary individuals.

Housing Assistance Plan (HAP) - A plan which must be prepared by counties to obtain community development block grants under the 1974 Housing and Community Development Act. The plan must describe housing needs in the county while presenting actual data to substantiate these needs. In addition, it must describe the county's plan to alleviate these needs. (See Appendix A for how the latest HAP regulations apply to the Handbook.)

Housing Market Analysis - Housing Market Analyses look for the imbalance in housing demand versus housing supply. Traditionally, this has included only objective economic, social, and demographic measures and few if any housing needs as perceived by the analyst (see also: "Housing Needs Analysis"). Housing Market Analysis is used in the Update portion of this Handbook (see also: "Update Components" and "Update Data").

Housing Needs Analysis - A study of housing needs which are not being met in a given area. Housing needs are societally determined standards which describe housing which is considered to be "inadequate." Housing Needs Analysis is used in the Base Data Analysis section of this Handbook (see also: "Base Data").

Housing Starts - The number of new housing units on which construction is begun in a given time period. In this Handbook, housing starts are either measured by actual survey of new housing developments or from the number of new building permits taken out in a given period. Also included but separately tabulated are public housing starts and purchases of new mobile homes.

Housing Stock - The total supply of housing existing at a given time, including occupied and vacant units and standard as well as substandard units.

Housing Submarkets - There are three primary types of housing submarkets:

- 1) Household submarket - A subgroup of households (e.g., disabled families, low income households, elderly persons, etc.) which can be distinguished within the overall housing market by a particular housing demand pattern or housing need.

2) Housing submarket - A specific portion of the overall housing supply (e.g., low rent one bedroom apartments) that can be distinguished by the particular housing demand pattern or housing need it meets.

3) Area submarkets - A subsection of a city or county market area which may be distinguished by the particular housing demand pattern or housing need which it meets. An example of an area submarket would be high density inner city apartment units renting to low to moderate income range tenants.

Housing Type - The structural type of a housing unit (e.g., single family home, mobile home, multiple family dwelling, etc.).

Housing Unit - The residence of a household. A housing unit can be a single family home, an apartment unit, a mobile home, etc. Housing units make up the housing stock or supply.

Housing Unit Characteristics - Any of a number of descriptive features of a housing unit such as rent, value, age, lack of complete plumbing, etc. (see also: "Housing Unit").

Housing Value - The asking price of a new housing unit or the market value of an existing unit. One source to use in determining market values for units which have not recently been sold is county assessor's data which often base the market value of a unit on the selling prices of comparable units which have recently been sold. The Census relies on the housing unit occupant's own estimate of the market value of the unit in determining housing value.

Housing Variable - See "Variable."

HUD Data - Housing data compiled by the U.S. Department of Housing and Urban Development (HUD) which presents information concerning the number of households in a county who live in "inadequate housing." The HUD data also provides household characteristics of these households (see also: "Household Characteristics" and "Inadequate Housing").

Inadequate Housing - As defined in the HUD data (see also: "HUD Data"), housing units which lack complete plumbing facilities or which are overcrowded at 1.25 persons per room or (for owners) which were built before 1939 and are worth less than \$10,000 if located within an SMSA or \$7500 if located outside an SMSA (see also: "Lacking Plumbing" and "Overcrowding") or (for rental units) those units in which gross rent exceeds 25% of household income. As an alternate to the age/value measure for owner occupied units, those units which are valued at more than 2.5 times annual gross household income are also considered inadequate by HUD. Definitions of inadequacy vary. This Handbook includes the HUD definitions and some additional variations in level and scale of inadequacy (see also: "HUD Data").

Income - When Census data are used in this Handbook, income refers to the annual income reported by a household. When Effective Buying Income (EBI) is used, income refers to net household income (after taxes).

Lacking Plumbing (also "Lacking Some or All Plumbing") - A housing unit which "lacks plumbing" is one which (1) lacks a private flush toilet for the exclusive use of its occupants, or (2) lacks hot and cold piped water, or (3) lacks a bathtub or shower for the exclusive use of the unit's occupants.

Latent Demand - See "Demand."

Low Income - See "Eligibility Threshold."

Matrix - As used in this Handbook, a table of data which depicts all the housing submarkets in an area by crosstabulating household characteristics and housing unit characteristics.

Merger - The combining of two or more housing units into fewer units through structural alteration or change in use.

Microfiche - A type of film on which the First Count and Fourth Count Census data (used in Level II of the Base Data Analysis section of this Handbook) are stored. One 3" x 4" sheet of microfiche contains the equivalent of more than 200 pages of printed Census data.

Migration - A process whereby households either move into or out of an area. "Net" migration is the difference between the number of households migrating into an area and the number of households migrating out. In the absence of an actual census of households, migration data is often estimated by examining the increase or loss of employment opportunities in an area or by increases or decreases in public school enrollment or motor vehicle registrations.

Mobile Home - A factory built housing unit, built on a bed with wheel axles to allow it to be transported to a site. Mobile homes rest either directly on the ground or on a concrete slab. They are commonly financed by a loan similar to an automobile loan (see also: "Modular Home").

Model - Representation of reality. In this Handbook, a simulation of the housing market or housing needs. A systematic method of analyzing the most critical housing data to estimate housing needs (see also: "Housing Market Analysis" and "Housing Needs Analysis").

Modular Home - A prefabricated factory built home which is permanently fixed to a foundation. Modular homes are financed with a mortgage loan (see also: "Mobile Home").

Multiple Housing Needs - A household whose housing unit is inadequate in more than one way (e.g., excessive housing costs and overcrowded) is said to have multiple housing needs (see also: "Inadequate Housing").

Need - See "Housing Needs Analysis" and "Housing Market Analysis."

Net Migration - See "Migration."

No Cash Rent - Households which do not own the housing unit in which they live and do not pay rent, usually because they "pay for" the use of the unit by providing services to the owner of the unit (e.g., as a superintendent), are counted as renter households with no cash rent.

Occupancy Status - A housing unit is either occupied or vacant; this is its occupancy status. Housing units which are temporarily occupied by persons having a "usual place of residence" elsewhere are classified as vacant. Usual places of residence from which the occupants are only temporarily absent are considered occupied.

Overcrowding - While standards vary, in this Handbook housing units with more than 1.01 persons per room are considered to be overcrowded and units with more than 1.51 persons per room to be "severely" overcrowded. HUD Data uses 1.25 persons per room as the definition of overcrowding (see "HUD Data"). The "persons" considered in this calculation are permanent members of the household. Excluded from the "rooms" counted as part of a unit are bathrooms, halls, closets, alcoves, unfinished porches, attics, basements, etc.

Postal Vacancy Survey - A survey of vacant housing units conducted by mail carriers at the request of the Federal Home Loan Bank. These provide estimates of vacancies as of the date of the mail delivery (survey) for single family homes, multiple family housing units, and mobile homes.

Primary Data - Data collected directly by the housing analyst or hired enumerators from visits to housing units to interview household members or inspect the premises or through phone or mail questionnaires to households (see also: "Sample Survey," "Secondary Data," and "Survey").

Private Housing - For the purposes of this Handbook, housing which is not built by a governmental agency is considered to be built by the private market. All housing except "public housing." Thus, governmentally assisted housing, such as homes purchased with FHA insured loans, are considered to be private market housing.

Private Market - See "Private Housing."

Public Housing - See "Private Housing."

Public Use Cluster - The Public Use data is a sample of households. By law the public use samples are separated into areas of 250,000 population or more. A public use cluster is a group of adjacent counties (and sometimes, census tracts) which individually have populations under 250,000 and are, therefore, aggregated as a "cluster" for the purpose of creating "public use samples" (see also: "Public Use Sample"). While, in some cases, one county or even part of a county may have a population greater than 250,000, it is also frequently necessary to cluster 15 or more counties to reach this size with the cluster occasionally crossing state lines.

Public Use Data - See "Public Use Sample."

Public Use Sample - The Public Use Sample is compiled from data obtained in the 5% sample of the 1970 Census (see also: "Census Sample Size"). While Census data are presented in a fixed table, by using Public Use Data the housing analyst can create a crosstabulation of any housing or household characteristics for which Census data were collected. The Public Use Sample, used in Level III of the Base Data Analysis section of this Handbook, is a package of selected crosstabulations prepared by and available from either the Department of Local Government Affairs or the Housing Research and Development Program. The Public Use Sample is based on a random 1% sample of the population (one-fifth of the 5% Census sample). To protect privacy, the geographic areas for which data is provided must have a population of at least 250,000 (see also: "Public Use Clusters").

Published Reports - See "Census, Published Reports."

Race - The population is divided into white, Negro, and several "other" racial groups such as American Indians, Japanese, Chinese, etc. Note that "Spanish American" is not a racial category (see also: "Spanish American").

Rehabilitation - The improvement of a housing unit's quality through addition, construction, renovation, and/or repairs. A unit is often considered to have been rehabilitated when its condition improves sufficiently for it to change from substandard to standard condition (see also: "Substandard Housing").

Rent - See "Contract Rent" and "Gross Rent."

Rent/Income Rates - A measure of excessive housing costs. The quotient of gross rent divided by household income (see also: "Excessive Housing Cost").

Rural - Not urban. "All rural" counties are those containing no towns of 2500 or more inhabitants in 1970. All persons living in areas outside towns of at least 2500 residents and the surrounding "fringe" of such towns are considered to be a part of the rural population. (See also "Urban.")

Sales Management Magazine (SMM) - A publication which contains yearly data on effective buying income of households by county. These data are used in Level I of the Update Analysis section of this Handbook (see also: "Effective Buying Income").

Sample - A subset of an entire population, selected for the purpose of representing the entire population. Properly controlled random sampling allows the analyst to survey a small percent of the total population with a high probability of accurately representing the entire population (see also: "Survey").

Scaling - As used in this Handbook, scaling is the measurement and comparison of a housing need at several levels of detail (e.g., overcrowding could be measured at 1.01, 1.25, 1.51, 1.75, 2.01, etc., persons per room). Scaling provides the analyst with a broader picture of the character of a housing need (e.g., for a specific submarket, overcrowding may concentrate at 1.51 persons per room while in another

submarket it concentrates at 1.75 persons per room.

Secondary Data - Data other than that which is collected directly from households or housing units. Examples include building department records, tax assessment records, utility company data, data from landlords, etc. (see also: "Primary Data" and "Survey").

Secondary Household - A household which shares a housing unit with another household because it is unable to locate or afford a separate housing unit (see also: "Latent Demand" under "Demand").

Severe Overcrowding - See "Overcrowding."

SMM - See "Sales Management Magazine."

SMSA - Standard Metropolitan Statistical Area. An SMSA must include: (1) a city with 50,000 or more inhabitants or (2) two adjacent, contiguous cities with a combined population of at least 50,000 and with the smaller city having not less than 15,000 residents. The SMSA is then the county or counties in which these cities are located plus adjacent counties which are, according to the Census Bureau, "metropolitan in character and economically and socially integrated with the central city."

Spanish American - In Illinois, the Census considers people to be Spanish-American if they report Spanish as their mother tongue, or if they are members of families in which the head or spouse reports Spanish as his or her mother tongue.

Starts - See "Housing Starts."

Submarkets - See "Housing Submarkets."

Substandard Housing - There is no single definition of "substandard housing." However, all measures of substandardness attempt to classify a unit as substandard if it does not provide a safe or healthy living environment. The most commonly used measure of substandardness is the Bureau of the Census's measure of "units lacking complete plumbing," although this substantially undercounts units which are substandard in other ways but have complete plumbing facilities (see also: "Inadequate Housing").

Supply - The number and type of housing units which are available for occupancy or which are actually occupied (see also "Housing Stock").

Survey - A general study or inspection. Methods for collecting data about housing and households (e.g., a field inspection of housing conditions, telephone interviews with landlords concerning rental rates and units available for rent, or a questionnaire mailed to households asking about their housing needs). Most surveys are not of an entire population, but of a representative sample (see also: "Sample"). A "primary" survey is taken of the actual households or housing units for which information is sought. A "secondary" survey is taken from sources who know about or have collected data from a primary source (e.g., the tax assessor's data on housing value) (see also: "Primary Data" and "Secondary Data").

Survival Probability - The probability that a death will not occur to a member of a given age group. For example, if the survival probability is .99 for persons in the age group 20-24, there is a 99 percent chance that a person aged 20-24 will survive to be 25 (or, 99 percent of all persons between 20 and 24 will survive to be 25).

Tenure - A housing unit is classified as "owner-occupied" or "renter-occupied" or "other" (e.g., condominium, cooperative). This classification is the housing characteristic, "tenure."

Total Care Elderly - Elderly persons who require assistance to obtain meals, health care, and social services as well as to perform most routine daily functions (bathing, for example). Such persons often require total care nursing homes.

Turnover - For the purposes of this Handbook, turnover is taken to mean the length of time a vacant unit remains on the market. A vacant unit will thus have a turnover time corresponding to either the length of time it remains vacant before becoming occupied or the length of time it is vacant before the owner ceases to try to find occupants for it. Turnover is also used to rate the stability of neighborhoods by determining the ratio of the number of households in the neighborhood who move in a year to the total number of households in the neighborhood.

Unit - See "Housing Unit."

Update Analysis - See "Update Data."

Update Components - In order to facilitate the Update Analysis portion of the Handbook, housing supply and demand are divided into six component parts. These components are then combined and interrelated in a housing market analysis (see also: "Housing Market Analysis").

Update Data - Data used to modify Base Data to obtain a housing analysis which more closely reflects the present housing market situation (see also: "Base Data").

Urban - A county with a rural population of less than 5 percent of its total population is referred to as "All Urban." Urban areas include all towns with populations of at least 2500 and the so-called (by the Bureau of the Census) "densely settled fringe" of such towns (see also: "Rural").

Utilities - Gas and electric service are considered to be utilities for the purposes of this Handbook. Water, garbage pickup, telephone service, etc., are not included as utilities (see also: "Contract Rent" and "Gross Rent").

Vacancy - Unoccupied housing units. Units may be vacant because no one is currently renting them or, in the case of non-rental units, because the owner of the unit is not currently occupying it, or because the unit is abandoned. "Seasonal" vacancies occur when units which are occupied during only part of the year (e.g., summer vacation homes) are unoccupied (see also: "Effective Vacancy" and "Frictional Vacancy").

Value - See "Housing Value."

Value/Income Ratio - A measure of excessive housing costs. The quotient of the value of an owner-occupied housing unit divided by the annual income of the household who own the unit (see also: "Excessive Housing Costs").

Variable - A housing or household characteristic which is used to describe submarkets and which may vary in value (e.g., income is a variable with which to describe or distinguish households and can vary from a \$0-2500 category up to a \$20,000+ category) (see also: "Household Characteristics," "Housing Submarkets," and "Housing Unit Characteristics").

Variability or Variance - In this Handbook these terms are used in a statistical sense. In one county 90% of the households represented by the variable "income" may be in two income categories (e.g., \$5,000-7,499 and \$7,500-9,999), in another county 90% of the incomes may be fairly equally distributed among nine income categories. In the latter case incomes have greater variability or variance from the mean.

Very Low Income - See "Eligibility Threshold."

Windshield Survey - An attempt to measure housing deterioration, vacancies, and other housing conditions by driving past units in an automobile and recording appropriate signs of these conditions which are visible from the outside of the unit.

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